

# *SOUTHEASTERN BIOLOGY*



Volume 55

April, 2008

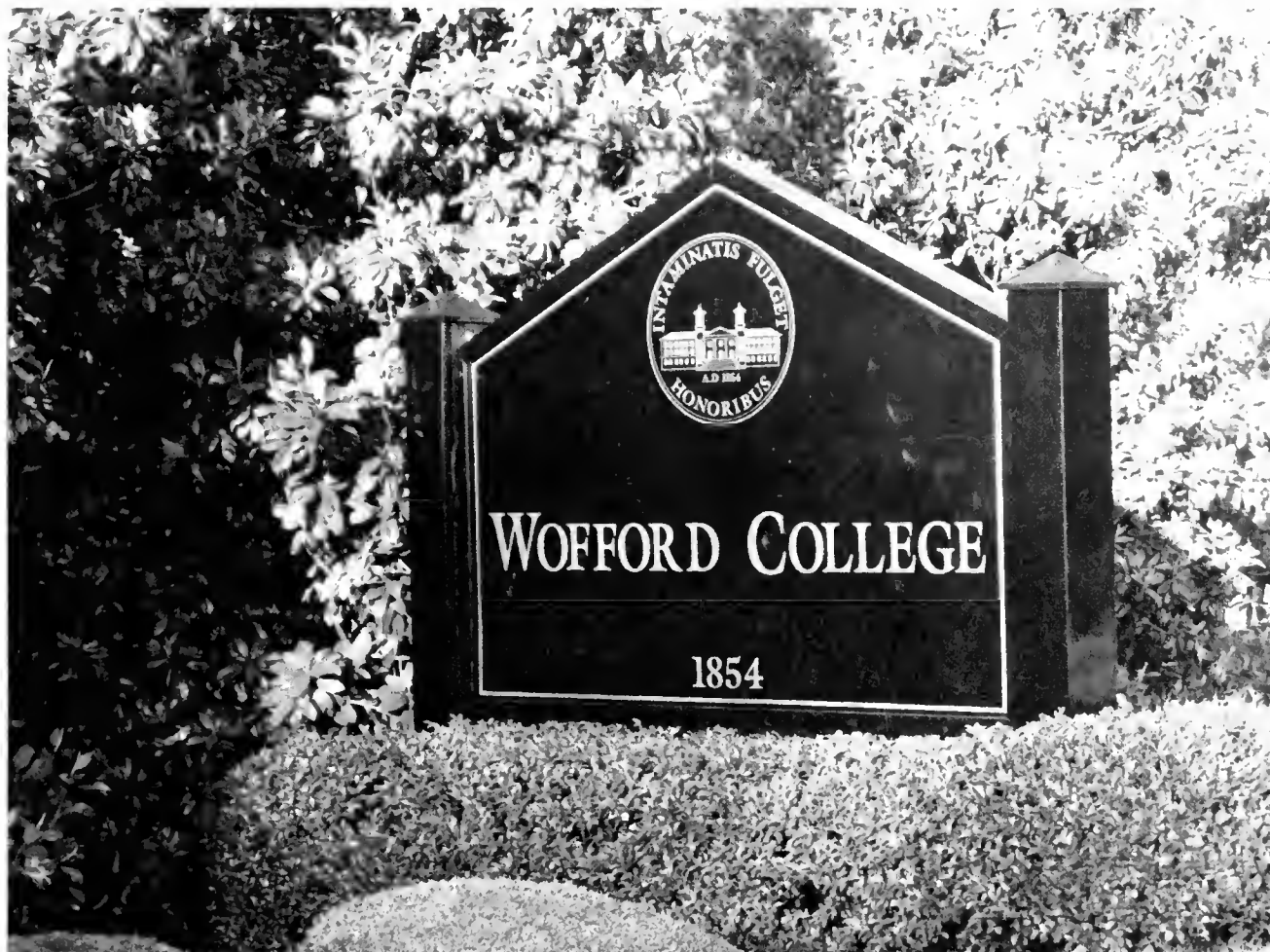
Number 2

## **ASB 69<sup>TH</sup> ANNUAL MEETING**

**APRIL 16-19, 2008**

Furman University  
Greenville, South Carolina, and  
Wofford College  
Spartanburg, South Carolina

See Page 107 and Consult Website  
<http://www.asb.appstate.edu/>



Entrance to the College.

*The Official Publication of  
The Association of Southeastern Biologists*  
<http://www.asb.appstate.edu/>

QH301  
.A78  
v. 55  
no. 2  
Apr 2008

## **SOUTHEASTERN BIOLOGY**

(ISSN 1533-8436)

SOUTHEASTERN BIOLOGY (ISSN 1533-8436) is published quarterly in January, April, July, and October by the Association of Southeastern Biologists, Inc., Carolina Biological Supply Co., 2700 York Road, Burlington, NC 27215. Periodicals postage paid at Burlington, NC, and additional mailing offices. POSTMASTER: please send address changes to the SOUTHEASTERN BIOLOGY business manager, Tim Atkinson, Carolina Biological Supply Co., 2700 York Road, Burlington, NC 27215. ASB members receive the SOUTHEASTERN BIOLOGY as part of their membership dues. For non-members, the cost is \$10.00 per issue.

All contributions, inquiries about missing numbers and other matters should be addressed to the Print Editor. News items should be sent to the News Editor. Send books to be reviewed to the Book Review Editor. Printed by Allen Press, 810 East 10<sup>th</sup> Street, Lawrence, KS 66044.

Print Editor.....	James D. Caponetti, Division of Biology, University of Tennessee, Knoxville, TN 37996-0830; (865) 974-6841; FAX (865) 974-4057; jcaponet@utk.edu.
Associate Editor .....	Nicole T. Welch, Dept. Sciences & Math., Mississippi Univ. for Women, 1100 College St., MUW-100, Columbus, MS 39701; (662) 329-7243; FAX (662) 329-7238; nwelch@as.muw.edu.
Web Editor.....	Dwayne A. Wise, Dept. of Biological Sciences, P. O. Drawer GY, Mississippi State University, Mississippi State, MS 39762; (662) 325-7579; FAX (662) 325-7939; daw1@ra.msstate.edu.
Business Manager.....	Tim Atkinson, Carolina Biological Supply Co., 2700 York Road, Burlington, NC 27215; (336) 538-6224; tim.atkinson@carolina.com.
News Editor .....	Ricky Fiorillo, Department of Biology, University of Louisiana at Monroe, Monroe, LA 71209; (318) 342-1797; FAX (318) 342-3312; fiorillo@ulm.edu.
Book Review Editor ....	Debbie Moore, Department of Natural Sciences, Troy University, P.O. Box 8368, Dothan, AL 36304-8368; (334) 983-6556, ext. 250; FAX (334) 983-6322; dsmoore@troy.edu.
Meetings Coordinator .	Scott Jewell, P.O. Box 1088, Mebane, NC 27302; Office (336) 421-0034; FAX (336) 421-3425; Cell (336) 213-7373; a2zconvention@yahoo.com.

### **ASB OFFICERS**

President .....	W. Michael Dennis, Breedlove, Dennis and Associates, Inc., 330 W. Canton Ave., Winter Park, FL 32789; (407) 677-1882; FAX (407) 657-7008; (800) 304-1882; mike@bda-inc.com.
President-elect .....	Thomas R. Wentworth, Department of Botany, Box 7612, North Carolina State University, Raleigh, NC 27695-7612; (919) 515-2168; FAX (919) 515-3436; twentwo@ncsu.edu.
Vice-President .....	Patricia B. Cox, Tennessee Valley Authority, 400 West Summit Hill Drive-WT11C, Knoxville, TN 37902; (865) 632-3609; FAX (865) 632-4223; pbcox@tva.gov.
Past President .....	Kim Marie Tolson, Dept. of Biology, University of Louisiana, Monroe, LA 71209-0520; (318) 342-1805; FAX (318) 342-3312; toltson@ulm.edu.
Secretary .....	Nicole T. Welch, Dept. Sciences & Math., Mississippi Univ. for Women, 1100 College St., MUW-100, Columbus, MS 39701; (662) 329-7243; FAX (662) 329-7238; nwelch@as.muw.edu.
Treasurer .....	Tim Atkinson, Carolina Biological Supply Co., 2700 York Road, Burlington, NC 27215; (336) 538-6224; tim.atkinson@carolina.com.
Membership Officer ....	Deborah Atkinson, Office of Continuing Education, School of Public Health, University of North Carolina, CB#8165, 400 Roberson Street, Chapel Hill, NC 27599-8165; (919) 843-6892; FAX (919) 966-5692; datkinso@email.unc.edu.
Archivist.....	John Herr, Dept. of Biological Sciences, University of South Carolina, Columbia, SC 29208; (803) 777-8110; FAX (803) 777-4002; herr@biol.sc.edu.

### **Executive Committee Members-at-Large**

2008:	Jennifer J. Davis, Dept. of Biology, Shorter College, Rome, GA 30161; (706) 233-7292; jdavis@shorter.edu. Dennis C. Haney, Dept. of Biology, Furman University, Greenville, SC 29613-0418; (864) 294-2050; FAX (864) 294-2058; dennis.haney@furman.edu.
2009:	Donald H. Roush, Department of Biology, University of North Alabama, P. O. Box 5181, Florence, AL 35632; (256) 765-4435; FAX (256) 765-4430; dhroush@una.edu. Robert Wayne Van Devender, Department of Biology, Appalachian State University, 572 Rivers Street, Boone, NC 28608; (828) 262-6907; (828) 262-2127; vandevenderr@appstate.edu.
2010:	Cathryn H. Greenberg, USDA Forest Service, 1577 Brevard Road, Asheville, NC 28806; (828) 667-5261, ext. 118; FAX (828) 667-9097; kgreenberg@fs.fed.us. Douglas A. Rayner, Department of Biology, Wofford College, Spartanburg, SC 29303; (864) 597-4624; raynerda@wofford.edu.

### **PURPOSE**

The purpose of this association shall be to promote the advancement of biology as a science by encouraging research, the imparting of knowledge, the application of knowledge to the solution of biological problems, and the preservation of biological resources. The ASB has representation in Section G Committee of the AAAS. Varying types of membership are available to individuals and institutions. See inside back cover.

### **TIME AND PLACE OF FUTURE MEETINGS**

2008	April 16-19: Co-hosted by Furman University, Greenville, South Carolina, and Wofford College, Spartanburg, South Carolina.
2009	April 1-4: Co-hosted by Jacksonville State University, Jacksonville, Alabama, and University of Alabama, Birmingham, Alabama.

## THE VIEW FROM HERE

### A MESSAGE FROM THE PRESIDENT W. MICHAEL DENNIS, PH.D.

In this space, I last argued for the continuing relevancy of ASB into its next 70 years, and promised a proposed vision for the future of ASB and some immediate proposals for its continuing vitality and relevance.

First, as to the vision for the future, today's society (whether it knows it or not) begs for ASB to continue to provide a place for all specialized disciplines within the field of biology to interact, sharing their interest, knowledge and passion with other colleagues and students. There is talk about the need for this sharing, and articles are being written about the need for sharing between different scientists. This is needed to provide the research, tools and analytical processes to critically study and provide valid data for addressing many of today's societal problems in the world we jointly inhabit. Also, ASB needs to continue its role in introducing, educating and transferring a passion for biology to students. Again, society is begging for this. One example is the case made by Richard Louv in his book, *Last Child in the Woods*: "we need biologists that can provide students at all levels the portal to nature". This is not a trivial need. Society needs a connection with nature, not just an arms length, feel good connection, but a connection with some intimacy and real knowledge at its base.

Second, what about proposals for ASB's continuing viability and relevance? I have made an embryonic case for ASB's relevancy. To realize this, ASB needs to continue to focus on bringing students and their faculty together for an annual dose of "revival". Topics of the day need discussing and I would recommend more special seminars and workshops on "topics of the day". Many such workshops have been well received in the past and, if properly selected and presented, can become a major contribution to the annual meeting. We also need to work to maintain our ties with affiliate societies and their memberships.

As to viability, we need to work to ensure our fiscal soundness. This requires ever increasing attention to the financial success of our annual meeting. Over the past several years the Executive Committee has been focused on ways to ensure the financial success of our meeting. The financial success and intellectual success of our annual meeting depends on having well-attended meetings. To accomplish this, selection of location and costs of the meetings at selected locations are fundamentally critical. We are coming to grips with this and moving toward guidelines to address both. Another area that is being addressed that will contribute to continuing viability is critical review of our procedures for running the Association. A proposal will be introduced at the April meeting to extend the term of the ASB president from one to two years. This will provide an opportunity for better continuity and establishment of longer range programs than can be accomplished in a one-year term. Also, this year, under the direction of the Executive Committee, an updated ASB Leadership Guide is being finalized. With the leadership of Dr. John Herr and the many contributions of the members

of the Executive Committee, we will have an updated Guide that better outlines the duties and responsibilities of each office in ASB. This combined with the past development of committee portfolios for each of our standing committees provides guidance and more effectively transfer of knowledge about these positions to those elected or selected to lead ASB. It is only through the effective leadership of the Executive Committee and the various committees that ASB can remain viable.

I look forward to seeing you all at the 2008 meeting of the Association in Spartansburg, South Carolina, April 16-19, 2008.



President, W. Michael Dennis

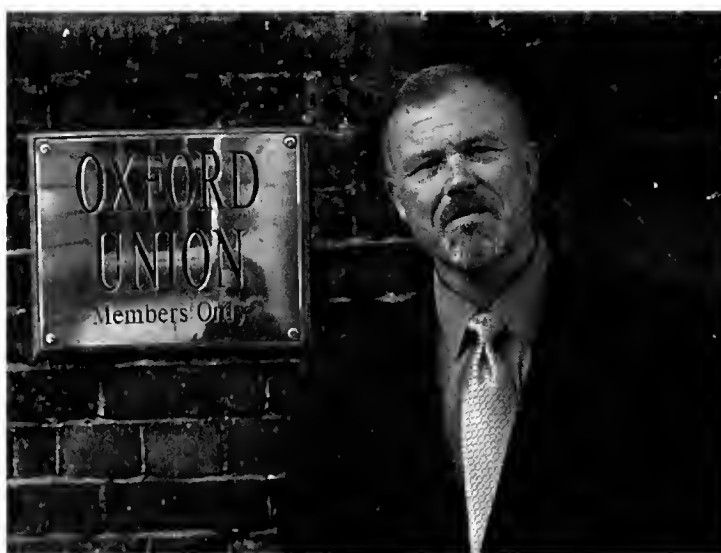
## ASB CANDIDATES FOR OFFICE—2008

The Nominating Committee composed of Swayne Wise (Chair), Thomas Wentworth, and Bonnie Kelly has selected the following slate of nominees for the ASB offices to be filled in 2008. Voting will take place at the annual business meeting at 11:15 a.m. on Friday, April 18, 2008. Additional nominations will be accepted from the floor before voting is conducted. Please plan to attend and vote. Elections can sometimes be close. Therefore, your vote could make a difference on who get elected to office.

<i>President-Elect</i>	<b>Patricia B. Cox</b>	Tennessee Valley Authority Knoxville, Tennessee
	<b>Terry D. Richardson</b>	University of North Alabama Florence, Alabama
<i>Vice-President</i>	<b>Elaine J. Davis</b>	Bowie State University Bowie, Maryland
	<b>Dennis C. Haney</b>	Furman University Greenville, South Carolina
<i>Treasurer</i>	<b>Timothy Atkinson</b>	Carolina Biological Supply Co. Burlington, North Carolina
<i>Executive Committee</i>	<b>Ronald V. Dimock</b>	Wake Forest University Winston-Salem, North Carolina
	<b>Christi Magrath</b>	Troy University Troy, Alabama
	<b>Paul A. Schmalzer</b>	Dynamac Corporation Kennedy Space Center, Florida
	<b>Randall L. Small</b>	University of Tennessee Knoxville, Tennessee



Patricia B. Box



Terry D. Richardson



Elaine J. Davis

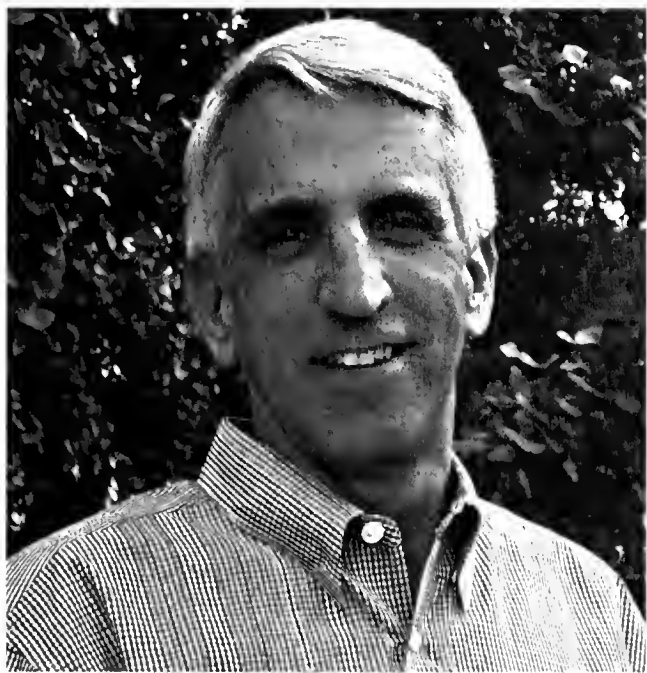


Dennis C. Haney



Timothy A. Atkinson





Ronald V. Dimock



Christi Magrath



Paul A. Schmalzer



Randall L. Small

## PRESIDENT-ELECT

**Patricia B. Cox** – Dr. Cox, Senior Botanist for the Tennessee Valley Authority Heritage program, received her B.S. and M.S. in Biology from Northeast Louisiana University, Monroe, LA;, and Ph.D in Botany from Louisiana State University, Baton Rouge, LA. Her area of expertise is plant taxonomy and systematics and plant anatomy. She has 30+ years experience as a field botanist with 13 years spent in academics at the University of Tennessee where she taught introductory biology, field botany and field pteridology. Pat has been a member of ASB for over 20 years and is currently Vice President of the society. Other duties include: Executive Committee Member-at-large, Place of Meeting Committee, Meritorious Teacher Award Committee, Publications Committee, Co-Program Chair for 1995 ASB meeting in Knoxville, and Co-Chair of the Local Arrangement Committee for 2006 ASB meeting in Gatlinburg. In addition, she is active in other professional societies or non-profit groups which include the Southern Appalachian Botanical Society (Membership secretary, Representative to the GSMNP Spring Wildflower pilgrimage), Discover Life in America (Board of directors; executive committee-secretary); secretary for the Great Smoky Mountains Spring Wildflower Pilgrimage Committee and the American Fern Society. Currently, Dr. Cox is working on an All Taxa Biodiversity Inventory (ATBI) project in the Great Smoky Mountains National Park. This Project involves using the trails as transects to map the fern species in the park. Over the past six summers, with the help of volunteers, over 200 miles of 60 trails have been mapped for ferns.

**Terry D. Richardson** – Dr. Richardson is an Associate Professor in the Department of Biology at the University of North Alabama, Florence. He earned a B.S. in Professional Biology from the University of North Alabama, a M.S. in Aquatic Biology from the University of Alabama, and a Ph.D. in Zoology and Physiology from Louisiana State University. In 1990 he received an Oak Ridge Associated Universities Postdoctoral Fellowship, and he accepted his current position at the University of North Alabama in 1991. In 2007, Terry completed residence at the University of Oxford, St. Anne's College, as a member of the Oxford Round Table. Dr. Richardson presently teaches nonmajors biology and upper division courses in Aquatic Ecology and General Ecology. He has also taught a summer course in Marine Behavioral Ecology and Tropical Marine Ecosystems at the Dauphin Island Sea Laboratory, Dauphin Island, Alabama. His research interests include environmental influences on the behavior of marine invertebrates, and population and production ecology of marine and freshwater mollusks. He currently involves undergraduate students in research on the foraging behavior of the Caribbean spiny lobster in Belize, Central America.

Terry has been an active member of ASB since 1982 when he joined as an undergraduate. Since that time he has served ASB in the following capacities: three years on, and chaired, both the ASB Student Research Award and Poster Award committees; three years as an Executive Committee Member-at-Large; vice-chair and chair of the Patrons and Exhibitors Committee; Chair of the Local



Arrangements Committee for the 66<sup>th</sup> Annual Meeting in Florence in 2005; six years as Associate Editor of *Southeastern Biology*; and served as Secretary of ASB for six consecutive years. Terry has nearly 15 years experience on the ASB Executive Committee. Additionally, Terry is heavily involved in campus and community service chairing numerous university committees and is a 2<sup>nd</sup> term incumbent Senator of the UNA Faculty Senate. He also serves his community by serving as an officer for community organizations and chairing community organization committees. He is a selected speaker for area nature groups and scuba organizations.

## VICE-PRESIDENT

**ELAINE J. DAVIS** – Dr. Davis is an Associate Professor of Biology at Bowie State University, Bowie, Maryland. She received her undergraduate degree from St. Augustine's College, Raleigh, North Carolina; the Master's degree from Atlanta University, Atlanta, Georgia, and the Ph.D. degree in Microbiology from Meharry Medical College, Nashville, Tennessee. Her research interest is in the area of molecular biology with emphasis on bacterial conjugation and mitochondrial DNA of the Balsam Woolly Adelgid. She is a strong advocate of student participation in research activities. Dr. Davis and her students have presented numerous papers at various society meetings. She is an active member of the Genes Families and Isozyme Conference, Sigma Xi the Scientific Research Society and was Program Chair for the 2003 ASB Annual Meeting. Currently, she serves as Chair of the Department of Natural Sciences and Director for the Model Institution for Excellence Initiative funded by the National Space Aeronautics Administration (NASA).

**Dennis C. Haney** – Dr. Dennis Haney is an Associate Professor of Biology at Furman University in Greenville, South Carolina. He received a B.A. in Biology at the University of California, San Diego, a M.S. in Zoology from Oregon State University, and a Ph.D. in Zoology at the University of Florida (1996). Dr. Haney's research is in the area of environmental and comparative physiology. More specifically he is interested in the physiological responses of animals, especially fish, to environmental stressors. Since 1999 Dr. Haney has been involved in an NSF-REU funded interdisciplinary watershed research program at Furman University, the River Basins Research Initiative (RBRI), collaborating with colleagues in the Biology, Earth and Environmental Sciences, and Chemistry departments. His research within the RBRI has focused on studying the interactions between land use and water chemistry, and how these factors affect the distribution and physiology of local stream fish. He is a strong advocate of undergraduate research, helping to mentor well over 100 undergraduate students over the past 5 years as part of the RBRI. Dr. Haney's students have given numerous presentations at national and regional scientific conferences, many at the ASB annual meetings, and have been co-authors on a number of publications. Dr. Haney teaches courses in Animal Physiology, Human Physiology, Pathophysiology, Vertebrate Endocrinology, Biostatistics, and has led field courses in Florida, the Bahamas, Belize, Ecuador, and the Galápagos

Islands. He is a member of the American Society of Ichthyologists and Herpetologists, the Society for Experimental Biology, and the Society for Integrative and Comparative Biology. Dr. Haney has been a member of ASB since 1995, is the Program Chair for the 2008 annual meeting of ASB, has served on the Poster Awards Committee, the ASB Student Research Award Committee, is the current chair of the Education Committee, and is currently ending a three-year term on the Executive Committee of ASB.

## TREASURER

**Timothy A. Atkinson** – Tim is the current ASB Treasurer and was elected to this office in 1999. He is an Assistant Director at Carolina Biological Supply Company, Burlington, North Carolina. He received his AS (1971) in Physical Education and Biology from Gadsden State Junior College, Gadsden, Alabama; BS (1974) in Biology and Physical Education, and MS (1977) in Biology from Jacksonville State University, Jacksonville, Alabama; and studied Ecosystematics under A. E. Radford at UNC Chapel Hill until starting at Carolina Biological (1980). He has performed contract work for the US Department of Defense, US Department of Energy, US Forest Service, US Fish and Wildlife Service, US Bureau of Land Management, The Nature Conservancy, and many private researchers. He has published steadily for over 30 years, including books, journal, magazine, and newspaper articles, videos, e-publications, and several treatments in Flora North America. Although not in a teaching position, Tim remains active in teaching through the training of teachers in Carolina Biological's Professional Development Workshops. Tim first became involved in ASB as a student in 1974 and currently is an individual patron member as well as representing the patron membership of Carolina Biological Supply Company.

## EXECUTIVE COMMITTEE

**Ronald V. Dimock, Jr.** – Dr. Dimock is the Thurman D. Kitchin Professor of Biology at Wake Forest University and a former chair of the department. He received the BA at the University of New Hampshire, the MS at Florida State University and the PhD at the University of California at Santa Barbara. He is past president of the Wake Forest chapter of Sigma Xi, the NC Academy of Sciences and the American Microscopical Society. He is currently in his 3<sup>rd</sup> term as Treasurer of the Society for Integrative and Comparative Biology. He has been a member of ASB since 1971, serving as chair of the Graduate Student Travel Award committee in 1983 and the Meritorious Teaching Award committee in 1999. His research interests are in the areas of invertebrate physiological ecology and behavior. He has published extensively on the symbiosis between unionicolid water mites and their freshwater mussel hosts, as well as on the biology of freshwater mussels, whose life history includes an obligate parasitic phase on an appropriate fish host. He has both a species and subgenus of unionicolid mites named in his honor. Among his graduate student alumni are 11 college and university professors including one at the University of Sao Paulo, Brazil, and one that currently is a program director at the NSF. In the fall

semester 2007, Dr. Dimock will direct for the second time Wake Forest's study abroad program in London, England.

**Christi Magrath** – Dr. Magrath is an associate professor of Biological and Environmental Science at Troy University, Troy, Alabama. She joined the faculty in 1999 and her primary research interests include establishing the relationship between replication initiation and transcription termination and investigating environmental responsiveness in *Saccharomyces cerevisiae*. She received a Ph.D. from the Tulane University in Molecular and Cellular Biology and earned a B.S. from the University of Southern Mississippi in 1993. Her current teaching interests are Molecular Biology, Immunology, Bioethics, Principles of Biology, and an interdisciplinary creative thinking seminar. In 2007, she was an invited participant in a NSF panel discussion hosted by the Directorate for Biological Sciences on the “needs of undergraduate biology education in the 21<sup>st</sup> century”; she was one of the few panelists from the Southeastern region and was excited to be part of a “needs assessment to determine the resources and knowledge” for the future. Her primary research goal as a faculty member is inclusion of undergraduate students and, in the past eight years, more than twenty research presentations have been made at ASB/Beta Beta Beta by students from her research laboratory (including two Johnson Award recipients). She is faculty advisor for the Mu Epsilon Chapter of Beta Beta Beta (biological honor society), an active participant and frequent judge for the regional meetings, and was the 2005 Southeastern Region TriBeta Faculty Advisor of the Year. She has been a member of the Association of Southeastern Biologists (Microbiology Research Awards Committee), Yeast in the Southeast, the American Society for Microbiology, and the Alabama Academy of Science. She has judged numerous regional and state science programs, including Science Olympiad and the Alabama Junior Academy of Science. She directed a community science outreach program aimed at teaching laboratory skills in Biology and Chemistry to high school students at schools with limited science resources, worked with Alabama Science in Motion, and is a Content Consultant for the Alabama Math Science Teaching Initiative. In 2007, she was awarded the Troy University Algernon Sydney Sullivan Award for “ideals of heart, mind, and conduct as evince a spirit of love for and helpfulness to other men and women”. Her research program has been funded or supported by the NSF CAREER Grant, the Alabama Department of Public Health, the TROY Foundation, and the Genome Consortium for Active Teaching.

**Paul A. Schmalzer** – Dr. Schmalzer received a B.A. in biology from Western Maryland College, (1976) and M.S. (1978) and Ph.D. (1982) in ecology from the University of Tennessee. He is a plant ecologist with the Dynamac Corporation at Kennedy Space Center, Florida. His current research interests include: effects of fire on vegetation and soils, restoration of scrub ecosystems, distribution of rare scrub plants, and composition and dynamics of barrier island plant communities. Previous research included studies of vegetation and flora of the Cumberland Plateau in Tennessee and habitat use by gopher tortoises. He has received certification as a Senior Ecologist by the Ecological Society of America. He is a

member of the Ecological Society of America, Society of Wetland Scientists, Association of Southeastern Biologists, Southern Appalachian Botanical Society, and other professional societies. He served as editor for *Castanea* (2001-2004) and as Vice Chair, Secretary, and Chair of the Southeastern Chapter of the Ecological Society of America. He serves on the Environmentally Endangered Lands Selection and Management Committee for Brevard County, Florida. He is author or coauthor of 44 published papers and numerous technical reports.

**Randy L. Small** – Dr. Small is an Associate Professor and Associate Department Head in the Department of Ecology and Evolutionary Biology at the University of Tennessee, Knoxville. He received a B.S. in Biology from East Tennessee State University (1991), a M.S. in Botany from Miami University (1994), and a Ph.D. in Genetics from Iowa State University (1999). While an undergraduate, Randy had the fortune to come under the influence of a botanist at ETSU who helped him realize his love of field botany and plant evolution, and who encouraged him to attend graduate school. Randy was also a member of  $\beta\beta\beta$  at ETSU. A faculty member at the University of Tennessee since 1999, Randy teaches an undergraduate course in Genetics, and graduate courses in Plant Taxonomy, Molecular Systematics and Molecular Evolution. His research focus is primarily in the field of plant systematics, especially of the plant family Malvaceae that includes many familiar plants such as cotton, okra, and *Hibiscus*. In 2004 Randy received the Raymond Holton Faculty Teaching Award from the Botany Department, and the Chancellor's Award for Professional Promise in Research and Creative Achievement from the University of Tennessee. Randy joined ASB in 2000 immediately following his appointment at the University of Tennessee, attended his first ASB meeting in Chattanooga, TN, in 2000, and hasn't missed one since. Randy was co-chair (with Dr. Pat Cox) of the Local Arrangements Committee for the ASB 2006 meeting held in Gatlinburg, TN. Randy is also a member of the Southern Appalachian Botanical Society, American Society of Plant Taxonomists, and Botanical Society of America, where he serves as Chair of the Genetics Section. Randy has also served as a volunteer trip leader for the Annual Spring Wildflower Pilgrimage in the Great Smoky Mountains since 2000. *œ*

**Furman University, Greenville SC  
and  
Wofford College, Spartanburg SC**

**are proud to host the**



**69<sup>th</sup> Annual Meeting of the  
Association of Southeastern Biologists  
April 16 – 19, 2008, Spartanburg, SC  
Spartanburg Marriott at Renaissance Park**

This four-day event brings together approximately 800 biologists from across the southeastern United States. The meeting features a distinguished plenary speaker, special symposia, field trips, oral and poster presentations, workshops, networking and social events, and more.

The Annual Meeting provides you with the exclusive opportunity to showcase your products and/or services to this large and important audience of faculty, students, researchers, conservation workers, military and government personnel, and business professionals with a common interest in biological issues. Interests are diverse, and range from genetics and molecular biology, to physiology and population biology, to community and ecosystem ecology and systematics.

**About ASB:** The Association of Southeastern Biologists (ASB) was established in 1937 by biologists concerned with the quality of biological research in the southeastern United States. Today, ASB is the largest regional biology association in the country, and is committed to the advancement of biology as a science by the promotion of science education, research, and the application of scientific knowledge to human problems.

**ASB Web Site:** Many thanks to Dr Dwayne Wise, Mississippi State University for launching ASB's new web site. Please visit our new and exciting web site: [www.asb.appstate.edu](http://www.asb.appstate.edu). Many new features have been added, register on-line for our Annual Meeting, view photos, inquire about career opportunities and more.

## **Furman University, Greenville**

Furman University is the oldest and largest private university in South Carolina. Founded in 1826, Furman moved three times in its early years before settling in Greenville in 1850. The most recent move was in 1961, when Furman relocated to its current 800-acre location on the outskirts of Greenville. The move to the stunning, new campus served as a catalyst for Furman's ongoing transformation from a primarily regional college to one of the leading liberal arts colleges in the United States. Today Furman has 2,660 students, offers majors and programs in 42 subjects and is one of the select group of colleges that qualify for a chapter of Phi Beta Kappa. Undergraduates come from 46 states and 31 countries.

In recent years Furman has been an exemplar of a new type of liberal arts institution. While still grounded in the humanities, arts and sciences, the university has earned a national reputation for its program of engaged learning, a problem-solving, project-oriented, experience-based approach to the liberal arts. Engaged learning encourages students to develop creative ways to put classroom theory into practice and to take a more active role in their education through internships, service learning, study abroad and research.

Furman is also a leader in environmental sustainability. In 2007, the school was named one of the nation's 50 most environmentally conscious colleges and universities by KIWI Magazine. Furman president David Shi is among a group of college presidents who recently committed to address the problems of global warming and pursue the goal of making their campuses climate neutral. Furman has also received awards from the South Carolina Wildlife Federation and the state chapter of the U.S. Green Building Council for its commitment to sustainability and conservation education.

## **Wofford College, Spartanburg**

Opened in 1854, Wofford is an independent liberal arts college of 1,350. Affiliated with the United Methodist Church, it has one of the nation's 270 Phi Beta Kappa chapters. The 150-acre campus is recognized both as a national arboretum and a National Historic District. Wofford is noted for excellent pre-professional programs in health fields and law, for study abroad (in the top five colleges nationally, according to the annual Open Doors report); for student voluntarism, including the Bonner Scholars program; and for a creative writing concentration that includes publishing student novels. Wofford was one of 20 colleges featured in *Student Success in College: Creating Conditions that Matter* (2005), the formal report of Project DEEP (Documenting Effective Educational Practices), a project of the National Survey of Student Engagement

The story is told that Wofford Terrier athletics teams take their name from a professor's dog, which raced out of the grandstand during a 1909 baseball game and drove off an opposing runner as he tried to tie the score. That legend may or may not be true, but the sleek and handsome Boston Terrier is a good symbol for Wofford College. Terriers are small, but they are full of intelligence and energy.



## ***Spartanburg, South Carolina***

The City of Spartanburg, with a population of 40,000, covers approximately 20.5 square miles. It draws on a population of nearly 750,000 within a 30-mile radius of its location. Conveniently situated at the junction of I-26 and I-85 and located in the foothills of the beautiful Blue Ridge Mountains, The Hub City has a mild climate, with four distinct seasons, providing fine weather for outdoor activities year-round. With six institutions of higher learning, Spartanburg is a "College Town." It was ranked by Relocate America as one of the "Top 25 places to Live and Go to School 2007", Promise Alliance ranked it as one of the "100 Best Communities for Young People," and Sperling's Cities Ranked and Rated 2007 rated it the top city in South Carolina in which to live. Spartanburg is the only city in South Carolina to receive the designation as a Bicycle-Friendly Community by the Washington-based League of American Bicyclists.

### ***The Spartanburg Marriott at Renaissance Park***

Centrally located in downtown Spartanburg South Carolina this stunning, new hotel is located within walking distance of restaurants, entertainment, quaint shops, and historic Spartanburg walking tours. Beautiful rooms, terrific restaurants, hallmark Marriott service and easy access to Greenville-Spartanburg International Airport make this Spartanburg SC hotel ideal for an ASB meeting. The Spartanburg Marriott Hotel and Conference Center offers 30,000 sq ft of flexible, state-of-art meeting and event space that includes 27 event rooms, numerous breakout rooms, 3 boardrooms, and the 11,340 sq ft Spartanburg Marriott Heritage Ballroom which can seat up to 1,500. ASB has completely booked the Hotel and Conference Center for the three days of the meeting, so we will have exclusive use of these excellent facilities.

### ***ASB-2008 Schedule***

#### **PLEASE NOTE**

**Schedule-at-a-Glance:** Information printed in this issue was current when *Southeastern Biology* went to press, but will change by the time of the meeting. An updated "Schedule-at-a-Glance" of all meeting events will be distributed to each person who registers for the meeting. Please use the updated version at the meeting.

**Publication of Abstracts:** Beginning in 2007, ASB implemented a policy that abstracts of ASB and BBB papers and posters will be printed in the July issue of *Southeastern Biology*. Please be aware that abstracts will not be printed if the presentation is cancelled. If a problem arises with the presentation of your paper or poster, please contact the Local Arrangements Co-Chair, Dr. Joe Pollard (joe.pollard@furman.edu).

**ASB-2008 Schedule**

<b>DAY/TIME</b>	<b>EVENT</b>	<b>LOCATION</b>
<b>Wednesday, April 16</b>		
8:00 am-8:00 pm	Registration Open	Marriott Lobby
8:00 am-8:00 pm	Meeting Headquarters	Fort Prince
8:00 am-8:00 pm	Cyber Café Open	Heritage Ballroom
9:00 am-4:00 pm	Exhibitor Move-In	Heritage Ballroom
12 noon-2 pm	Exhibitor Pizza Party (Exhibitors Only)	Heritage Ballroom
1:30-5:30 pm	ASB Executive Committee Meeting	Oak Boardroom
1:30-5:30 pm	SABS Council Meeting	Jesse Cleveland
2:00-5:00 pm	SSP Executive Committee Meeting	Spartan
5:30-7:30 pm	SSP Presidential Symposium	Wadsworth
7:30-9:00 pm	ASB Plenary Session: Dr. William Schlesinger – “Managing Forests and Soils to Store Carbon and Mitigate Climate Change”	Leonard Auditorium, Old Main Bldg., Wofford College
9:00-10:30 pm	Welcome Reception	Old Main Bldg.
<b>Thursday, April 17</b>		
7:00-8:30 am	ASB Past Presidents' Breakfast	Dupre's B
7:00 am-5:00 pm	PowerPoint Preview & Tech. Check	Musgrove Mill
8:00 am-5:00 pm	Registration Open	Marriott Lobby
8:00 am-5:00 pm	Exhibits Open	Heritage Ballroom
8:00 am-5:00 pm	Cyber Café open	Heritage Ballroom
8:00 am-5:00 pm	Exhibitors Break Room	Cowpens
8:00 am-5:00 pm	Press Room	Earl's Fort
8:00-9:00 am	ASB Posters I: Setup	Heritage Ballroom
8:00-11:30 am	Symposium I – “Them's the Brakes: The Past and Future of North American Bamboo”	Azalea A
8:15am-12:00pm	SE Society of Parasitologists I	Wadsworth
8:15am-12:00pm	Animal Ecology I	Croft
8:30-11:15 am	Aquatic, Wetland, & Marine Biology	Daniel Morgan A
8:30-11:15 am	Invertebrate Zoology	Daniel Morgan B
8:30-11:45 am	Plant Systematics I	Azalea B
8:45-11:45 am	Microbiology	Dogwood
10:00-10:30 am	Break: Visit Exhibits & Posters	Heritage Ballroom
9:00 am-4:00 pm	ASB Posters I: On Exhibit	Heritage Ballroom
10:00-11:00 am	ASB Posters I: Presenters of <u>odd</u> numbered posters must be present	Heritage Ballroom
12:00-1:30 pm	Lunch (individuals and organizations)	
12:00-1:30 pm	Education Comm. Lunch Workshop: “Now What Do I Do? Career Options In Biology and How to Attain Them”	Daniel Morgan B
12:00-1:30 pm	SWS S. Atlantic Chapter Luncheon	Dupre's A
1:00-5:00 pm	Tri-Beta Field Trip to Lake Conestee Nature Park	Meeting point TBA

**Thursday, April 17 (continued)**

1:30-4:15 pm	Plant Biology	Azalea B
1:30-4:45 pm	SE Society of Parasitologists II	Wadsworth
1:30-5:00 pm	Plant Ecology I	Azalea A
1:45-4:30 pm	Genetics & Cell Biology I	Daniel Morgan A
1:45-4:45 pm	Herpetology I	Dogwood
1:30-5:00 pm	Symposium II: "Research at Undergraduate Institutions: Pitfalls and Possibilities"	Croft
3:00-3:30 pm	Break: Visit Exhibits & Posters	Heritage Ballroom
2:30-3:30 pm	ASB Posters I: Presenters of <u>even</u> numbered posters must be present	Heritage Ballroom
4:00-5:00 pm	ASB Posters I: Poster Removal	Heritage Ballroom
6:00-11:00 pm	Thursday Night Social	Locations TBA

**Friday, April 18**

7:00 am-4:00 pm	PowerPoint Preview & Tech. Check	Musgrove Mill
7:00-8:30 am	SABS/BSA Breakfast	TBA
7:30-8:30 am	ASB Patrons & Exhibitors Breakfast	TBA
7:30-8:45 am	βββ Poster Setup	Heritage Ballroom
7:30-9:00 am	SSP Breakfast & Business Meeting	TBA
8:00 am-4:00 pm	Cyber Café open	Heritage Ballroom
8:00 am-4:00 pm	Exhibitors Break Room	Cowpens
8:00 am-4:00 pm	Press Room	Earl's Fort
8:00-9:00 am	ASB Posters II: Setup	Heritage Ballroom
8:00 am-2:00 pm	Exhibits Open	Heritage Ballroom
8:15-10:00 am	Teaching Biology	Daniel Morgan B
8:15-11:15 am	Plant Ecology II	Azalea A
8:15-11:15 am	Animal Ecology II	Daniel Morgan A
8:30-10:00 am	Genetics & Cell Biology II	Dogwood
8:45-11:00 am	Plant Systematics II	Croft
9:15-11:00 am	SE Society of Parasitologists III	Wadsworth
10:00-10:30 am	Break: Visit Exhibits & Posters	Heritage Ballroom
8:30-9:00 am	βββ Officers Meeting	Walnut Grove
9:00-10:00 am	βββ Judges Meeting	Walnut Grove
9:00-10:00 am	SHC Executive Board Meeting	Spartan
9:00 am-4:00 pm	ASB Posters II: On Exhibit	Heritage Ballroom
10:00-11:00 am	ASB Posters II: Presenters of <u>odd</u> numbered posters must be present	Heritage Ballroom
10:00-11:00 am	βββ Business Meeting	Azalea B
10:00am-12:00pm	βββ Poster Presentations	Heritage Ballroom
11:15am-12:15pm	<b>ASB Business Meeting</b>	Azalea B
12:15-1:45 pm	Lunch (Individuals & Organizations)	
12:15-1:30 pm	Converse College Sponsored Lunch and Speaker: "Women in Science"	TBA
12:15-1:45 pm	ESA/SE Luncheon	TBA
1:00-4:30 pm	βββ Paper Presentations	Wadsworth
1:00-4:30 pm	βββ Paper Presentations	Croft
1:00-4:30 pm	βββ Paper Presentations	Daniel Morgan B
1:45-4:15 pm	Herpetology II	Dogwood

1:45-4:15 pm	Plant Systematics III	Daniel Morgan A
1:45-4:45 pm	Plant Ecology III	Azalea B
2:00-4:30 pm	Symposium III: "The Southeast Regional Knowledge Partnership: From Regional Relevance to Global Significance"	Azalea A
2:00-4:00 pm	Exhibitor Move-Out	Heritage Ballroom
2:30-3:30 pm	ASB Posters II: Presenters of <u>even</u> numbered posters must be present	Heritage Ballroom
3:30-4:00 pm	ASB Posters II: Poster Removal	Heritage Ballroom
4:00-5:00 pm	SHC Business Meeting	Wisteria
6:00-7:00 pm	Friday Night Social	Marriott Lobby
7:00-10:00 pm	Awards' Banquet: Presentation and Announcement of Awards	Heritage Ballroom

### Saturday, April 19

7:30-11:30 am	ASB Executive Committee Breakfast Meeting	Oak Boardroom
9:00 am-1:00 pm	Field Trips (Listed in this issue)	Meeting points TBA
8:30 am-4:30 pm	Curator's Workshop	Wofford College

## Conference Badges

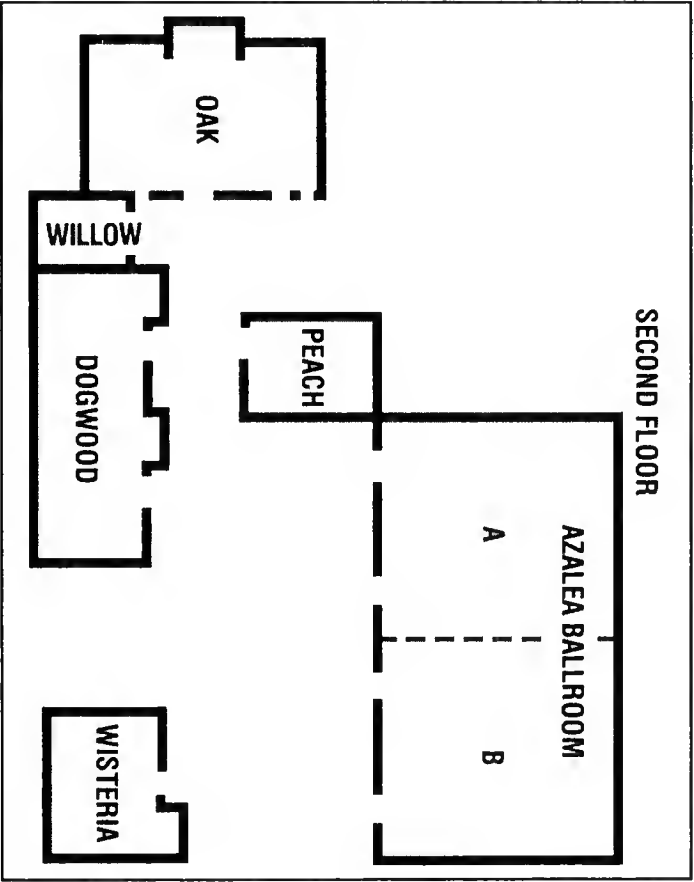
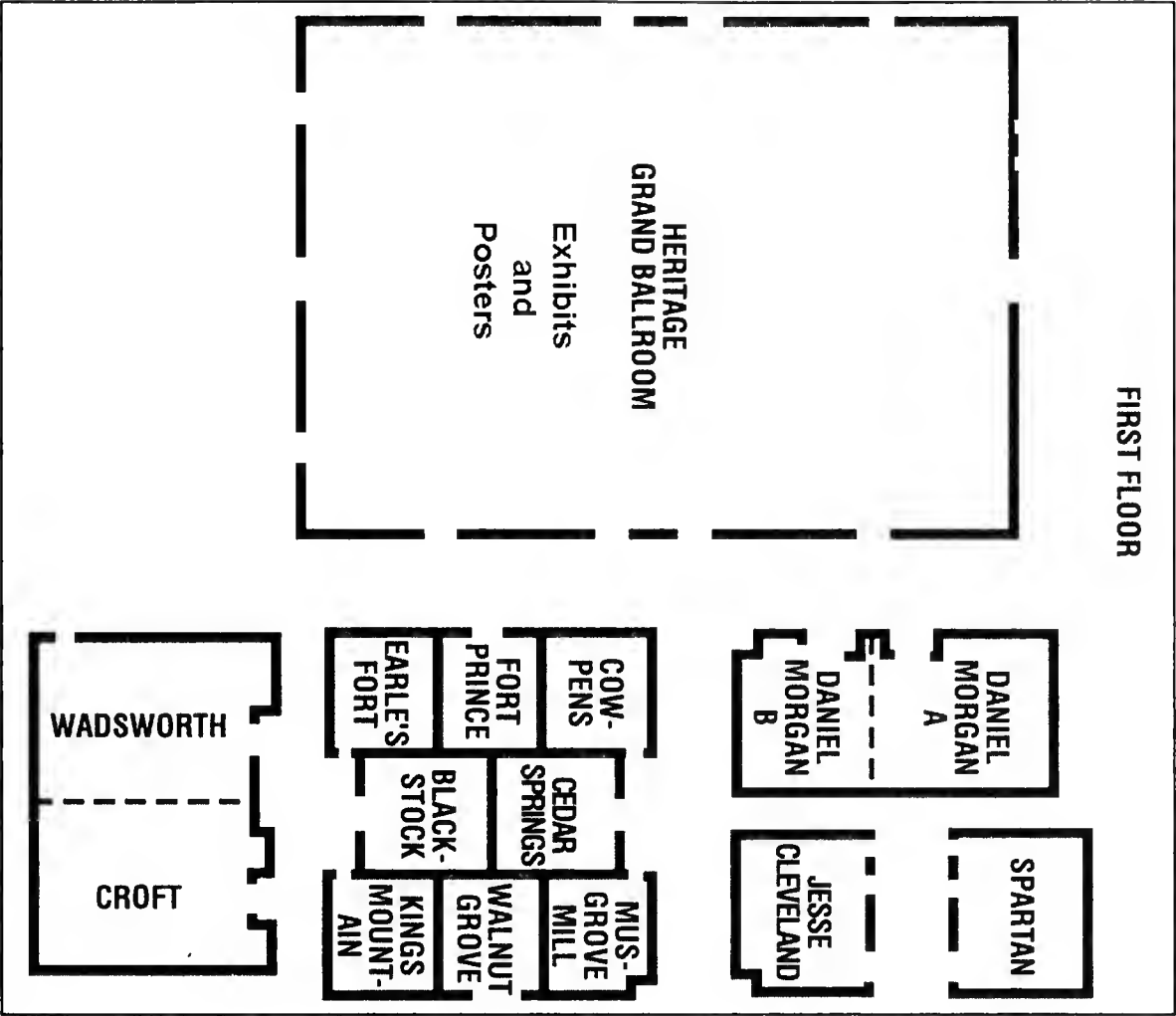
You will receive your meeting badges when you arrive in Spartanburg. Simply proceed to the Registration Area in the Marriott to receive your badge. Family members of conference participants should ask for guest conference badges at the registration desk. **YOU MUST WEAR YOUR BADGE TO ALL FUNCTIONS, INCLUDING SOCIAL EVENTS!**

### IMPORTANT INFORMATION FOR PRESENTERS

All oral papers will be presented using **Microsoft Office PowerPoint 2003 only**. Speakers who prepare their presentation using Office 2007 are **strongly** encouraged to save it as an Office 2003 file. Presenters should bring a backup copy on a CD or USB memory drive to the meeting.

**Complete and final presentations must be submitted on CD to the audiovisual coordinator to be received by April 4.** The first author's name and truncated title should be written on the upper surface of the CD using an indelible marker.

Submit CD to be **received** by April 4 2008 to: **Dr. Nicholas Schisler, Department of Biology, Furman University, 3300 Poinsett Hwy, Greenville, SC 29613.**



**Floor Plan of Meeting Rooms**  
**Spartanburg Marriott at**  
**Renaissance Park**

**PLENARY SPEAKER**  
**WILLIAM H. SCHLESINGER**

Our Plenary Speaker for the 2008 Annual Meeting of the Association of Southeastern Biologists is Dr. William H. Schlesinger. His lecture is entitled "Managing Forests and Soils to Store Carbon and Mitigate Climate Change." Dr. Schlesinger is one of the world's foremost experts on biogeochemical cycles, including that for carbon. His topic is both timely and of considerable importance to all of us, and we look forward to his presentation at the upcoming meeting in Spartanburg, South Carolina.

Dr. Schlesinger is a long-time resident and researcher in the southeast. He conducted research for his doctoral dissertation in the Okefenokee Swamp in southern Georgia, and he recently completed 27 years of service on the faculty of Duke University. He is currently President of the Institute of Ecosystem Studies, a private ecological research institute on the grounds of the Cary Arboretum in Millbrook, NY. Completing his A.B. at Dartmouth (1972) and Ph.D. at Cornell (1976), he moved to Duke in 1980, where he retired in spring 2007 as Dean of the Nicholas School of the Environment and Earth Sciences and as James B. Duke Professor of Biogeochemistry. Dr. Schlesinger and his wife, Lisa, live in Millbrook, New York, where they enjoy birdwatching, gourmet cooking, and collecting southwestern art.

Dr. Schlesinger is the author or coauthor of over 180 scientific papers on subjects of environmental chemistry and global change and a widely-adopted textbook on biogeochemistry. He was among the first to quantify the amount of carbon held in soil organic matter globally, providing subsequent estimates of the role of soils and human impacts on forests and soils in global climate change. He was elected a member of The National Academy of Sciences in 2003 and was President of the Ecological Society of America for 2003-2004. He is also a fellow in the American Geophysical Union and the Soil Science Society of America.

Dr. Schlesinger's past work has taken him to diverse habitats, ranging from the Okefenokee Swamp to the Mojave Desert of California, and three times as a Duke alumni tour guide to Antarctica. His research has been featured on NOVA, CNN, NPR, and on the pages of *Discover*, *National Geographic*, *The New York Times*, and *Scientific American*. Dr. Schlesinger has testified before U.S. House and Senate Committees on a variety of environmental issues, including preservation of desert habitats, global climate change and carbon sequestration. He currently serves on the Board of Trustees for the Doris Duke Charitable Foundation (New York) and the Southern Environmental Law Center (Charlottesville) and on the Board of Scientific Advisors for Terrapass LLC (San Francisco). He is also a member of the selection advisory committee for the St. Andrews Prize for Environment, sponsored by Conoco-Phillips.

Dr. Schlesinger provided the following personal statement of his research interests: "Since the beginning of my scientific career, I have been interested in the circulation of the chemical elements in natural ecosystems—now widely known as biogeochemistry. Most of my work has focused on soils, especially on





William H. Schlesinger

the carbon stored in soils, which contain a major pool in the global carbon cycle. My early work provided estimates of the storage of organic carbon (humus) and inorganic carbon (largely calcium carbonate) in soils, losses of soil carbon to runoff, changes in soil carbon with conversion of land to agriculture, and accumulations of carbon during soil development. More recently, I have examined changes in soil processes and soil carbon storage that will accompany plant growth at elevated levels of atmospheric carbon dioxide, as simulated in the Duke Forest Free-Air CO<sub>2</sub> Enrichment (FACE) experiment. My work also evaluates recommendations for carbon sequestration as a means to control the accumulation of CO<sub>2</sub> in Earth's atmosphere and to mitigate the potential for global warming. In addition to my studies of soil carbon, I have provided a budget summarizing the sources of atmospheric ammonia and a synthetic compilation of the global boron cycle. My approach, philosophy, and much of my other work is

summarized in my textbook, *Biogeochemistry: an analysis of global change*, available in its second edition (1997) through Academic Press/Elsevier, San Diego."

We welcome Dr. Schlesinger to the 69<sup>th</sup> Annual Meeting of the Association of Southeastern Biologists!



## ASB PAPER AND POSTER SESSIONS

### ASB PAPER SESSIONS WEDNESDAY, APRIL 16, 2008

Southeastern Society of Parasitologists  
Presidential Symposium  
Wadsworth Room

**Presiding:** Dr. Vina Faulkner, Department of Allied Health, Lincoln Memorial University, Harrogate TN

- |      |   |  |
|------|---|--|
| 5:30 | 1 | <b>MARCIANO-CABRAL, FRANCINE, MELISSA JAMERSON AND GUY CABRAL.</b> Virginia Commonwealth University School of Medicine—Free-living amebae as emerging protozoan pathogens.   |
| 6:00 | 2 | <b>KANIA, STEPHEN A., SHAWN L. LEWIS, AND JOHN C. NEW, Jr.</b> University of Tennessee, Knoxville—Detection of hantavirus in the Great Smoky Mountains National Park.  |
| 6:30 | 3 | <b>YABSLEY, MICHAEL J.<sup>1,2</sup>, AND LAUREL GARRISON<sup>3</sup>.</b> University of Georgia, Warnell School of Forestry and Natural Resources <sup>1</sup> , University of Georgia, Southeastern Cooperative Wildlife Disease Study <sup>2</sup> , and Georgia Division of Public Health <sup>3</sup> —Land-use changes and recreation: impacts on tick-borne diseases. |

Association of Southeastern Biologists  
Plenary Lecture  
Leonard Auditorium, Old Main Bldg., Wofford College

- |      |  |   |
|------|--|---|
| 7:30 |  | <b>SCHLESINGER, WILLIAM H.</b> Cary Institute of Ecosystem Studies, Millbrook, NY—Managing forests and soils to store carbon and mitigate climate change. |
|------|--|---|

**THURSDAY APRIL 17, 2008  
MORNING SESSION**

**Symposium I**

**Them's the Brakes: The Past and Future of North American Bamboo**

**Azalea A**

**Presiding: Scott Franklin, University of Memphis**

- 8:00     4     **BRANTLEY, CHRISTOPHER G<sup>1</sup>, STEVEN G. PLATT<sup>2</sup>, AND THOMAS R. RAINWATER<sup>3</sup>.** U.S. Army Corps of Engineers<sup>1</sup>, Sul Ross State University<sup>2</sup>, and 155 Johnson Ferry Rd., Marietta, GA<sup>3</sup>—Descriptions of presettlement and historical canebrakes.
- 8:20     5     **PLATT, STEVEN G<sup>1</sup>, CHRISTOPHER G. BRANTLEY<sup>2</sup>, AND THOMAS R. RAINWATER<sup>3</sup>.** Sul Ross State University<sup>1</sup>, U.S. Army Corps of Engineers<sup>2</sup>, and 155 Johnson Ferry Rd., Marietta, GA<sup>3</sup>—Native American ethnobotany of cane.
- 8:40     6     **GRIFFITH, ADAM, KATHY MATHEWS, DAVE KINNER, BEN TANNER AND ROB YOUNG.** Western Carolina University—The chemical and physical soil properties of *Arundinaria gigantea* in western North Carolina.
- 9:00     7     **TRIPLETT, JIMMY.** Iowa State University—Phylogeny and taxonomy of the genus *Arundinaria* (Poaceae: Bambusoideae).
- 9:20     8     **MATHEWS, KATHERINE G.** Western Carolina University—Genetic diversity of *Arundinaria gigantea* (Poaceae) stands in western North Carolina and evidence for monoclonal flowering based on AFLPs.
- 9:40     9     **GAGNON, PAUL R.** Louisiana State University—Disturbance ecology and population biology of giant cane (*Arundinaria gigantea*).
- 10:00     **COFFEE BREAK: VISIT POSTERS**
- 10:30     10     **SCHOONOVER, JON, KARL W.J. WILLIARD, CHRISTOPHER R. BLATTEL, AND CHAD YOCUM.** Southern Illinois University Carbondale—The utility of giant cane (*Arundinaria gigantea*) as a riparian buffer species in southern Illinois watersheds.
- 10:50     11     **OSLAND MICHAEL J., JAMES W. PAHL, AND CURTIS J. RICHARDSON.** Duke University—Use of a native bamboo (*Arundinaria gigantea*) for stream restoration in the Southeastern U.S.
- 11:10     12     **RUDE, B., R. SYKES, T. FINNLEY, J. PARSONS, AND H. BISSELL.** Mississippi State University, University of Arkansas, Memphis Zoo—Energy allocation in *Arundinaria gigantea*.

- 11:30 13 **BALDWIN, BRIAN.S.<sup>1</sup>, MARGARET CIRTAIN<sup>2</sup>, JOHN OUELLETTE<sup>1</sup>, D. SCOTT HORTON<sup>1</sup>, AND SCOTT FRANKLIN<sup>3</sup>.** <sup>1</sup>Mississippi State University, <sup>2</sup>University of South Carolina and <sup>3</sup> The University of Memphis—Propagation methods and growth enhancement of rivercane (*Arundinaria gigantea*) ramets for use in field restoration projects.
- 11:50 14 **ZACZEK, J.J.** Southern Illinois University Carbondale—Survival and growth of *Arundinaria* rhizomes in greenhouse and field plantings in the Cache River watershed, Illinois.

## Plant Systematics I

### Azalea B

Presiding: TBA

- 8:30 15 **SMALL, RANDALL.** University of Tennessee—Nuclear genes as tools in plant phylogenetics.
- 8:45 16 **SHAW, JOEY<sup>1</sup>, JUN WEN<sup>2</sup>, ROSMARIE HABERLE<sup>3</sup>, CHIN SIEW-WAI<sup>3</sup>, AND DANIEL POTTER<sup>3</sup>.** The University of Tennessee at Chattanooga<sup>1</sup>, The Smithsonian Institution<sup>2</sup>, The University of California at Davis<sup>3</sup>—Chloroplast DNA phylogeny of *Prunus* L. (Rosaceae) using *trnS-trnG*, *psbA-trnH*, and *trnL-trnL-trnF* cpDNA sequences.
- 9:00 17 **BINKLEY, MEAGAN<sup>1</sup>, J. HILL CRADDOCK<sup>1</sup>, FENNY DANE<sup>2</sup>, and JOEY SHAW<sup>1</sup>.** University of Tennessee at Chattanooga<sup>1</sup> and Auburn University—Chestnut and chinquapin hybrids are confounding taxonomy: a DNA sequence-based inquiry into a putative hybrid (*C. neglecta* Dode) population.
- 9:15 18 **BRANNON, RICKY D., MIRANDA L. DORNIS, KRISTEN M. SMITH AND KERRY D. HEAFNER.** Limestone College—A morphological analysis of allotetraploid segregates of *Isoetes piedmontana* (N.E. Pfeiffer) C.N. Reed.
- 9:30 19 **BOLIN, JAY F.<sup>1</sup>, REBECCA D. BRAY<sup>1</sup>, CARL TAYLOR<sup>2</sup> AND LYTTON J. MUSSELMAN<sup>1</sup>** Department of Biological Sciences, Old Dominion University<sup>1</sup> and National Science Foundation<sup>2</sup>—A molecular parentage study of several populations of undescribed tetraploid *Isoetes* in Virginia.
- 9:45 20 **FURCHES, M. STEVEN AND RANDALL SMALL.** University of Tennessee—Assessment of chloroplast variation in the genus *Sarracenia* in the southeastern United States.
- 10:00 **COFFEE BREAK: VISIT POSTERS**
- 10:30 21 **ALLISON, JAMES R.** DeKalb County Parks & Recreation Dept. (Georgia)—A new, shrubby mint from the Piedmont of Georgia (USA).
- 10:45 22 **JOHNSON, GEORGE P.** Arkansas Tech University—*Platanthera flava* (L.) Lindl. (Orchidaceae): a preliminary study of morphological variation and varietal recognition.

- 11:00 23 **RICHARDSON, CHANNING AND ALLEN C. RISK.** Morehead State University—Pteridophytes of Carter Caves State Resort Park, Carter County, Kentucky.
- 11:15 24 **FLAGG, RAYMOND O.<sup>1</sup> AND GERALD L. SMITH<sup>2</sup>.** Carolina Biological Supply Company<sup>1</sup> and High Point University<sup>2</sup>—Contributions to Mexican *Habranthus* and *Zephyranthes* by Thad Howard.
- 11:30 25 **MURRELL, ZACK E. AND DERICK POINDEXTER.** Appalachian State University—The role of networks in meeting the challenges of data integration.

### Microbiology

#### Dogwood

Presiding: TBA

- 8:45 26 **WATKINS, RICHARD M.** Jacksonville State University—Analysis of the expression of *cry26* in various *Bacillus* backgrounds.
- 9:00 27 **PITTMAN, JOSEPH<sup>1</sup>, WILLIAM J. KENYON<sup>1</sup> AND MICHAEL P. SPECTOR<sup>2</sup>.** University of West Georgia<sup>1</sup> and University of South Alabama<sup>2</sup>—The starvation-stress response (SSR) of pigmented and non-pigmented strains of *Serratia marcescens*.
- 9:15 28 **LUO, HAIWEI, ROBERT FRIEDMAN AND RICHARD A. LONG.** University of South Carolina—The occurrence of alkaline phosphatase in marine bacterial genomes and its implication for their phosphorus ecophysiology.
- 9:30 29 **LONG, RICHARD A. AND HAIWEI LUO.** University of South Carolina—Marine microbial metagenomic survey of alkaline phosphatase.
- 9:45 30 **MUSCARELLA, MARIO, JUDY AWONG-TAYLOR AND JENNIFER ZETTLER.** Armstrong Atlantic State University—The potential for pathogenic and non-pathogenic *Escherichia coli* to survive in beach sand from Tybee Island, Georgia.
- 10:00 **COFFEE BREAK: VISIT POSTERS**
- 10:30 31 **NELSON<sup>1</sup>, LAWRENCE, BENJIE BLAIR<sup>1</sup>, CHRIS MURDOCK<sup>1</sup>, MARK MEADE<sup>1</sup> STEPHEN WATTS<sup>2</sup> AND ADDISON L. LAWRENCE<sup>3</sup>.** Jacksonville State University<sup>1</sup>, University of Alabama in Birmingham<sup>2</sup> and Texas A&M Experimental Station<sup>3</sup>—Molecular analysis and comparison of gut microflora in captive-raised sea urchins (*Lytechinus variegatus*) grown in captive culture conditions.
- 10:45 32 **BOGARD, AMY, JUSTIN CONLEY, ARCHANAA JOHN, JESSICA LEET, CARRIE ROSS, BEVERLY SWITTER, AND HENRY SPRATT.** University of Tennessee at Chattanooga—Bioremediation potential of compost/mulch mixture for waste motor oil.

- 11:00 33 **ROSS, CARRIE AND HENRY SPRATT.** University of Tennessee at Chattanooga—Electrical current generation and organic matter degradation in bacterial batteries metabolizing raw sewage.
- 11:15 34 **WEAVER, AMANDA, AND HENRY SPRATT.** University of Tennessee at Chattanooga—Microbial mineralization of select organic wastes adsorbed to a compost/mulch absorbent.
- 11:30 35 **HOWLETT, INIGO, AND HENRY SPRATT.** University of Tennessee at Chattanooga—Geospatial distribution and activity of polycyclic aromatic hydrocarbon degrading bacteria in riparian soils near Chattanooga, Tennessee.

### **Southeastern Society of Parasitologists I**

#### **Byrd-Dunn Student Paper Competition**

##### **Wadsworth**

**Presiding: Dr. Alexa Rosypal, Department of Pathology and Laboratory Medicine, University of North Carolina at Chapel Hill**

- 8:15 36 **GROCE, CHAD AND CHERYL D. DAVIS.** Department of Biology, Biotechnology Center, Western Kentucky University—High prevalence of *Trypanosoma cruzi* infection in raccoons and opossums from Kentucky.
- 8:30 37 **COFFMAN, CAROLINE, KATIE EDENFIELD, CAROL RUCKDESCHEL<sup>1</sup>, SAM POSEY, EMILY PIERCE, WHITNEY BULLARD, AND C. A. HALL.** Department of Biology, Berry College, <sup>1</sup>Cumberland Island Museum of Natural History—A species diverse survey of Southeastern Georgia for the sylvatic distribution of *Trypanosoma cruzi*.
- 8:45 38 **BROWN, EMILY L.<sup>1,2</sup>, MOURAD GABRIEL<sup>3</sup>, MATTHEW GOMPPER<sup>4</sup>, RYAN MONELLO<sup>4</sup>, KRISTA M. WENNING<sup>5</sup>, AND MICHAEL J. YABSLEY<sup>1,2</sup>.** <sup>1</sup>Southeastern Cooperative Wildlife Disease Study, College of Veterinary Medicine, University of Georgia, <sup>2</sup>Warnell School of Forestry and Natural Resources, University of Georgia, <sup>3</sup>Department of Veterinary Medicine and Epidemiology, Center for Vector-Borne Diseases, University of California Davis, <sup>4</sup>Department of Fisheries and Wildlife Sciences, University of Missouri, and <sup>5</sup>USDA-APHIS, Wildlife Services—Seroprevalence of *Trypanosoma cruzi* in mammals of the United States.
- 9:00 39 **PIERCE, EMILY, KATIE EDENFIELD, SAM POSEY AND C. A. HALL.** Department of Biology, Berry College, Mount Berry, GA—Vertical transmission of type I and type IIa isolates of *Trypanosoma cruzi* from the southeastern United States in BALB/c mice.
- 9:15 40 **ROELLIG, DAWN M.<sup>1, 2</sup>, ANGELA E. ELLIS<sup>3</sup>, and MICHAEL J. YABSLEY<sup>2, 4</sup>.** Department of Infectious Diseases, College of Veterinary Medicine, The University of Georgia<sup>1</sup>; Southeastern Cooperative Wildlife Disease Study, Department of Population Health, College of Veterinary



Medicine, The University of Georgia<sup>2</sup>; Athens Veterinary Diagnostic Laboratory, College of Veterinary Medicine, The University of Georgia<sup>3</sup>; D.B. Warnell School of Forestry and Natural Resources, The University of Georgia<sup>4</sup>—Infections with geographically and genetically different strains of *Trypanosoma cruzi* in two North American reservoir hosts induce dissimilar infection dynamics.

- 9:30 41 **SHULMAN, MARISA ETTA, HOLLY J PETERS, ALCIA CHAPMAN, CHARLES FAULKNER, GERI GECHEVA AND SHARON PATTON.** University of Tennessee College of Veterinary Medicine (UTCVM)—Prevalence of *Toxoplasma gondii* and *Dirofilaria immitis* in feral cats (*Felis catus*) in eastern Tennessee.
- 9:45 42 **PETERS, HOLLY J, MARISA ETTA SHULMAN, AMANDA FANNING, ALCIA CHAPMAN, AND SHARON PATTON.** University of Tennessee College of Veterinary Medicine—Prevalence of endoparasites in cats (*Felis catus*) in eastern Tennessee based on fecal examination.
- 10:00 **COFFEE BREAK: VISIT POSTERS**
- 10:30 43 **STOCKDALE, HEATHER D.<sup>1</sup>, SOREN P. RODNING<sup>2</sup>, M. DANIEL GIVENS<sup>1</sup>, A. RAY DILLON<sup>1</sup>, JOSEPH C. NEWTON<sup>1</sup>, JENNIFER A. SPENCER<sup>1</sup>, CHRISTINE C. DYKSTRA<sup>1</sup>, DAVID S. LINDSAY<sup>3</sup>, AND BYRON L. BLAGBURN<sup>1</sup>.** <sup>1</sup>Auburn University College of Veterinary Medicine, <sup>2</sup>Auburn University College of Agriculture, <sup>3</sup>Virginia Tech V-M Regional College of Veterinary Medicine—Experimental infection of cats with *Tritrichomonas foetus* supports differences between isolates of bovine and feline origin.
- 10:45 44 **TACKETT, KRISTINA, MEGAN BOWLING, CHAD GROCE, AND CHERYL D. DAVIS.** Department of Biology, Biotechnology Center, Western Kentucky University—Raccoons and opossums as potential reservoir hosts for tick-borne zoonoses in Kentucky.
- 11:00 45 **MURDOCK, JESSICA H.<sup>1,2</sup> MICHAEL J. YABSLEY<sup>1,2</sup>, CHANDRASHEKAR RAMASWAMY<sup>3</sup>, TOM O'CONNOR<sup>3</sup>, AND SUSAN E. LITTLE<sup>4</sup>.** University of Georgia, Warnell School of Forestry and Natural Resources<sup>1</sup>, Southeastern Cooperative Wildlife Disease Study<sup>2</sup>, IDEXX Laboratories<sup>3</sup>, Oklahoma State University Center for Veterinary Health Sciences<sup>4</sup>—Evaluation of white-tailed deer as natural sentinels for *Borrelia*.
- 11:15 46 **MERWAD, ABDULLAH<sup>1</sup>, SHEILA MITCHELL<sup>2\*</sup>, ANNE ZAJAC<sup>2</sup>, GEORGE FLICK<sup>2</sup> AND DAVID LINDSAY<sup>2</sup>.** Zagazig University, Zagazig, Egypt<sup>1</sup> and Virginia Tech<sup>2</sup>—Effect of high pressure processing on *Hymenolepis diminuta* eggs.
- 11:30 47 **JONES, REBECCA D. AND STEPHEN C. LANDERS.** Troy University—Morphological analysis of the trematode parasite *Alloglossidium*.
- 11:45 48 **SHEEHAN, KATE L.<sup>1, 2</sup>, JUST CEBRIAN<sup>1, 2</sup>, JOHN F. VALENTINE<sup>1, 2</sup>, AND JACK O'BRIEN<sup>1</sup>.** University of South Alabama<sup>1</sup>, Dauphin Island Sea Lab<sup>2</sup>—Spatial and seasonal variability of parasite assemblages of the common grass shrimp in Mobile Bay.

## Animal Ecology I

Croft

Presiding: TBA

- 8:15     49     **BURGER, JOSEPH ROBERT<sup>1</sup>, ADRIAN S. CHESH<sup>1</sup>, RODRIGO A. CASTRO<sup>2</sup>, LILIANA ORTIZ TOLHUYSEN<sup>2</sup>, LUIS A. EBENSPERGER<sup>2</sup>, AND LOREN D. HAYES<sup>1</sup>.** The University of Louisiana at Monroe<sup>1</sup> and Center for Advanced Studies in Ecology and Biodiversity, Pontificia Universidad Católica de Chile<sup>2</sup>—Island theory of social hosts and parasitism.
- 8:30     50     **SUPER, PAUL E.<sup>1</sup>, KEITH LANGDON<sup>2</sup>, BECKY J. NICHOLS<sup>2</sup>, CHARLES R. PARKER<sup>3</sup> AND BRIAN G. SCHOLTENS<sup>4</sup>.** Appalachian Highlands Science Learning Center, NPS<sup>1</sup>, Great Smoky Mountains National Park, NPS<sup>2</sup>, US Geological Survey, Biological Resources Division, Great Smokies Field Station<sup>3</sup> and College of Charleston<sup>4</sup>—The Great Smoky Mountains National Park all taxa biodiversity inventory—what to do with what we've got.
- 8:45     51     **STEELMAN, CHARLOTTE K. AND MICHAEL E. DORCAS.** Department of Biology. Davidson College—Optimizing amphibian monitoring programs: Development of predictive models of anuran calling activity.
- 9:00     52     **BLUE, JARROD<sup>1</sup>, ELIZABETH J. BREWER<sup>1</sup>, DANIEL BUSH<sup>1</sup>, CHRISTOPHER CASTILLO<sup>1</sup>, JUSTIN GOLDBERG<sup>1</sup>, KATHERINE HAWKINS<sup>2</sup>, JOSH HAYWOOD<sup>1</sup>, TYLER KRENTZ, AND CHRISTOPHER J. PARADISE<sup>1</sup>.** Davidson College<sup>1</sup> and Middlebury College<sup>2</sup>—Colonization and community dynamics in a simulated treehole metacommunity.
- 9:15     53     **PARADISE, CHRISTOPHER<sup>1</sup>, JARROD BLUE<sup>1</sup>, JOHN BURKHART<sup>2</sup>, LAUREN HARSHAW<sup>3</sup> AND LESLIE SMITH<sup>4</sup>.** Davidson College<sup>1</sup>, University of South Alabama<sup>2</sup>, University of Florida<sup>3</sup>, University of Rhode Island<sup>4</sup>—Local and regional factors influence the structure of treehole metacommunities.
- 9:30     54     **BRANNON, M. PATRICK AND MELISSA A. BURT.** Highlands Biological Station and the University of North Carolina at Chapel Hill—Discarded bottles as a source of small mammal distributional data along an elevational gradient in the southern Appalachians.
- 9:45     55     **CROMER, R. BRANDON.** Mount Olive College—Associations between two bottomland hardwood forest shrew species and hurricane-generated woody debris.
- 10:00     **COFFEE BREAK: VISIT POSTERS**
- 10:30     56     **CRUZ, ANGEL, DENNIS C. HANEY AND SURESH MUTHUKRISHNAN.** Furman University—Relationships between urban land cover, fish assemblage structure, and channel geomorphology in the Enoree River basin, South Carolina.

- 10:45 57 **PRICE, STEVEN J.<sup>1,2</sup> AND MICHAEL E. DORCAS<sup>2</sup>.** Wake Forest University<sup>1</sup> and Davidson College<sup>2</sup>—Factors at spatial and temporal scales influence stream salamander abundances in western Piedmont streams.
- 11:00 58 **PITTMAN, SHANNON. AND MICHAEL DORCAS.** Davidson College—Population dynamics and demography of a bog turtle (*Glyptemys muhlenbergii*) population in a Piedmont meadow bog.
- 11:15 59 **SHEPARD, BENJAMIN R. E. AND RUSSELL L. MINTON.** University of Louisiana, Monroe—Constancy of morphological plasticity in a freshwater snail (*Elimia proxima*).
- 11:30 60 **KANES, JESSICA, KEITH WALTERS, JOHN HUTCHENS AND JAMES LUKEN.** Coastal Carolina University—Micro-metazoan use of *Spartina alterniflora* stems of different ages.
- 11:45 61 **RICE, CHRIS L. AND KIM MARIE TOLSON.** University of Louisiana at Monroe—Ambient temperature effect on roost site selection by *Corynorhinus rafinesquii* (Rafinesque's big-eared bat) in a bottomland hardwood forest streambed.

### Aquatic, Wetland, and Marine Biology

Daniel Morgan A

Presiding: TBA

- 8:30 62 **CIANCHETTI, JOHN<sup>1</sup>, WILLIAM BERTI<sup>2</sup> AND DEAN COCKING<sup>1</sup>.** James Madison University<sup>1</sup> and DuPont Co., Central Research & Development, Newark, DE<sup>2</sup>—Survey of the mercury content of earthworms on the South River Virginia floodplain.
- 8:45 63 **PEDERSON, CHARLES L. AND ROBERT J. KRENZ.** Eastern Illinois University—Use of photopigments as a descriptor of phytoplankton assemblages for biotic assessment of Illinois reservoirs.
- 9:00 64 **HAWLEY, JOANNA E. AND DENNIS C. HANEY.** Furman University—Fish health in rural and urban streams within the Enoree and Saluda River basins, South Carolina.
- 9:15 65 **WOTAWA, AMY M. AND NEIL BILLINGTON.** Troy University—Elucidation of genetic markers for distinguishing between the northern and southern walleye strains in Alabama via PCR-RFLP analysis.
- 9:30 66 **LYLE, SONIA, NEIL BILLINGTON, RACHAEL N. KOIGI, JANET GASTON, AMY M. WOTAWA, RONALD E. CREECH, AND CARLA RASUCK.** Troy University—Genetic variation in walleye and sauger populations determined by protein electrophoresis.

- 9:45 67 **DE STEVEN, DIANE<sup>1</sup> AND RICHARD LOWRANCE<sup>2</sup>.** USDA Forest Service, Southern Research Station Center for Bottomland Hardwoods Research<sup>1</sup> and USDA Agricultural Research Service, Southeast Watershed Research Laboratory<sup>2</sup>—The CEAP–Wetlands Project: assessing wetland ecosystem services provided by agricultural conservation practices.
- 10:00 **COFFEE BREAK: VISIT POSTERS**
- 10:30 68 **HUDSON III, HERMAN W. AND ROBERT ATKINSON.** Christopher Newport University—Comparing the rate of water table drawdown to vegetative prevalence index values in five restored Virginia wetlands.
- 10:45 69 **ROQUEMORE, JACQUELINE D., ROBERT B. ATKINSON, AND HERMAN W. HUDSON, III.** Christopher Newport University—An evaluation of wetlands restored as part of the in-lieu-fee program in Virginia: the value of third party monitoring by a university.
- 11:00 70 **EGERTON, TODD A., ROBERT J. JOHNSON AND HAROLD G. MARSHALL.** Old Dominion University—Extended blooms of the potentially harmful dinoflagellates *Karlodinium veneficum* and *Cochlodinium polykrikoides* in Virginia tributaries.

### Invertebrate Zoology and Entomology

Daniel Morgan B

Presiding: TBA

- 8:30 71 **MILNE, MARC A<sup>1</sup>, VICTOR R TOWNSEND JR<sup>2</sup>, PENELOPE SMELSER<sup>3</sup> AND FRANCIS SMITH<sup>3</sup>.** Old Dominion University<sup>1</sup>, Virginia Wesleyan College<sup>2</sup> and Norfolk Vector Control<sup>3</sup>—Parasitizing the parasite: mite parasitism of mosquitoes in an urban environment.
- 8:45 72 **STOCKS, IAN C.** Department of Entomology, Soils, and Plant Sciences, Clemson University—Repeated functional convergence of wing coupling structures in Trichoptera.
- 9:00 73 **GRAHAM, JOHN<sup>1</sup>, ANTHONY KRZYSIK<sup>2</sup>, DAVID KOVACIC<sup>3</sup>, JEFFREY DUDA<sup>4</sup>, CARL FREEMAN<sup>5</sup>, JOHN EMLER<sup>4</sup>, JOHN ZAK<sup>6</sup>, RUSSELL LONG<sup>1</sup>, MICHAEL WALLACE<sup>3</sup>, CATHERINE CHAMBERLIN-GRAHAM<sup>1</sup>, JONATHAN NUTTER<sup>1</sup>, and HAL BALBACH<sup>7</sup>.** Berry College<sup>1</sup>, Prescott College<sup>2</sup>, University of Illinois<sup>3</sup>, Western Fisheries Research Center<sup>4</sup>, Wayne State University<sup>5</sup>, Department of Biology, Texas Tech University<sup>6</sup> and U. S. Army ERDC-CERL<sup>7</sup>—Ants as indicators of landscape disturbance at Fort Benning, Georgia.
- 9:15 74 **RAY, MARGARET W., HAROLD F. HEATWOLE, AND THOMAS R. WENTWORTH.** North Carolina State University—Limno-terrestrial tardigrades of North Carolina: initial findings of a study along an east-west transect.

- 9:30 75 **DAFOE, ROBERT AND FRANK A. ROMANO, III.** Jacksonville State University—A multiyear leaf litter tardigrade survey on Dauphin Island, Alabama.
- 9:45 76 **ROGERS-LOWERY, CONSTANCE L.** Catawba College—Ontogenetic changes in the localization and metabolism of calcium in scleractinian coral.
- 10:00 **COFFEE BREAK: VISIT POSTERS**
- 10:30 77 **SMITH III, JULIAN P.S.** Dept. of Biology, Winthrop University—Stem cells in *Stenostomum virginianum* (Platyhelminthes, Catenulida).
- 10:45 78 **SEKORA, NICHOLAS S., KATHY S. LAWRENCE, EDZARD VAN SANTEN, AND JOHN A. MCINROY.** Auburn University—A step-wise dilution scheme to determine the number of nematodes required for accurate FAME identification.
- 11:00 79 **DAVISON, PAUL G.<sup>1</sup>, HENRY W. ROBISON<sup>2</sup>, NIELS VAN STEENKISTE<sup>3</sup>, AND TOM ARTOIS<sup>3</sup>.** University of North Alabama<sup>1</sup>, Southern Arkansas University<sup>2</sup>, Hasselt University, Belgium<sup>3</sup>—Microturbellarians—an addition to the limnoterrestrial fauna of mossy tree trunks.
- 11:15 80 **BATSON, SANDI M., JONATHAN S. TEDETON, AND KRISTEN G. VAN DEN MEIRACKER.** North Greenville University—Environmental factors impacting gemmulation of freshwater sponges (Porifera: Demospongiae): An ongoing study.
- 11:30 81 **RASHLEIGH, BRENDA.** U.S. Environmental Protection Agency—Benthic macroinvertebrate assemblages and environmental correlates in springs of the Ridge and Valley Province.

## THURSDAY APRIL 17, 2008 AFTERNOON SESSION

### Plant Ecology I

#### Azalea A

**Presiding: TBA**

- 1:30 82 **JOLLS, C. L., J. E. MARIK, C. GOODWILLIE AND H. VANCE-CHALCRAFT.** East Carolina University, Greenville, NC—The effects of fertilization on plants and their herbivores in a disturbed pine wetland.
- 1:45 83 **MCLEITCHIE, D. NICHOLAS, KELLY RENIGAR, GISELA GARCIA-RAMOS AND PHILIP H. CROWLEY.** University of Kentucky—Intraspecific effects of plant extracts on germination of sexual and asexual propagules in *Marchantia inflexa*.

- 2:00 84 **LETT, CARLY AND LAURA E. DeWALD.** Western Carolina University—Effects of mycorrhizal fungi on the growth of *Celastrus orbiculatus*.
- 2:15 85 **CRABTREE, CHRISTOPHER D., JOSEPH S. ELY, and HAROLD W. KELLER.** University of Central Missouri—Association of macrofungal species and assemblages with vascular plant communities at Ha Ha Tonka State Park, Missouri.
- 2:30 86 **HUSTAD, VINCENT<sup>1</sup>, VERNIER, KIMBERLY<sup>1</sup>, ANDREW S. METHVEN<sup>1</sup>, SCOTT MEINERS<sup>1</sup>, AND ANDREW N. MILLER<sup>2</sup>.** Eastern Illinois University<sup>1</sup>, Illinois Natural History Survey<sup>2</sup>—Ecology of terrestrial macrofungi in old growth prairie groves.
- 2:45 87 **WILEY, JOHN J., JR. AND BRIAN C. MCCARTHY.** Ohio University—Silvicultural effects on bryophyte community composition in eastern deciduous oak forests of North America.
- 3:00 **COFFEE BREAK: VISIT POSTERS**
- 3:30 88 **HUGHES, NICOLE M<sup>1</sup>, WILLIAM K. SMITH<sup>1</sup>, AND THOMAS C. VOGELMANN<sup>2</sup>.** Wake Forest University<sup>1</sup> and <sup>2</sup>University of Vermont <sup>2</sup>—The functional significance of red abaxial coloration in understory plants.
- 3:45 89 **KOONTZ, STEPHANIE M. AND JAMES O. LUKEN.** Coastal Carolina University—Effect of prescribed burning on growth-stage structure of longleaf pine at Sandy Island, South Carolina.
- 4:00 90 **GROEN, KRISTEN E., CHRISTOPHER STIEHA, PHILIP H. CROWLEY, AND D. NICHOLAS MCLETCHE.** University of Kentucky—Sex-specific plant responses to light intensity: implications for spatial segregation of the sexes.
- 4:15 91 **MARCHIN, RENÉE, PAMELA ABIT, ON LEE LAU AND WILLIAM HOFFMANN.** North Carolina State University—High levels of embolism observed in temperate deciduous forest trees during an extreme drought.
- 4:30 92 **DENSLOW, MICHAEL W. AND ZACK E. MURRELL.** Appalachian State University—Spatial patterns of botanical exploration in North Carolina: a study using local floras.
- 4:45 93 **HINKLE, C. ROSS<sup>1</sup> AND PAUL A. SCHMALZER<sup>2</sup>.** University of Central Florida<sup>1</sup> and Dynamac Corporation<sup>2</sup>—Acquisition and management of environmentally endangered lands to protect biodiversity in Brevard County, Florida.



## Plant Biology I

## Azalea B

Presiding: TBA

- 1:30 94 **HUSKINS, STACY AND JOEY SHAW.** University of Tennessee at Chattanooga—A flora of the North Chickamauga Gorge State Natural Area, Hamilton County, Tennessee.
- 1:45 95 **LAMONT, E. E.<sup>1</sup> AND RICHARD STALTER<sup>2</sup>.** Honorary Research Associate, Institute of Systematic Botany, The New York Botanical Garden<sup>1</sup> and Department of Biological Sciences, St. John's University<sup>2</sup>—Orchids of Atlantic coast barrier islands from North Carolina to New York.
- 2:00 96 **KELLER, HAROLD W, JOSEPH S. ELY, COURTNEY M. KILGORE, ANGELA R. SCARBOROUGH, SYDNEY E. EVERHART, KENNETH L. SNELL, AND ROBERT BRESHEARS.** University of Central Missouri—Rock Creek National Park BioBlitz, 2007, Washington, D.C.: tree canopy myxomycete survey.
- 2:15 97 **KELLER, HAROLD W, COURTNEY M. KILGORE, SYDNEY E. EVERHART, ANGELA R. SCARBOROUGH, JOSEPH S. ELY. AND CHARLY POTTORFF.** University of Central Missouri—The double rope climbing technique: tree canopy studies of the Great Smoky Mountains National Park, Daniel Boone National Forest, Kentucky, and Pertle Springs, Missouri.
- 2:30 98 **RAYNER, DOUGLAS A., BRENDA WICHMANN, SARA CORFMAN, KAKI BRUCE, ERIN CAUDILL, BLAKE DERRICK, AND MIRANDA WORSTER.** Wofford College—Population biology/ecology of *Sisyrinchium dichotomum* (Iridaceae): Insights from studies spanning 10 years.
- 2:45 99 **BRENDECKE, WILLIAM<sup>1</sup> AND JAMES ZACZEK<sup>1</sup> AND KAREN MANGAN<sup>2</sup>.** Southern Illinois University<sup>1</sup> and U.S. Fish and Wildlife Service<sup>2</sup>—Effects of collection and planting dates of different *Arundinaria gigantea* collection sources on field-scale restoration.
- 3:00 **COFFEE BREAK: VISIT POSTERS**
- 3:30 100 **MATTHEWS, TONY<sup>1,2</sup>, MELANIE DEVORE<sup>2</sup> and KATHLEEN PIGG<sup>3</sup>.** <sup>1</sup>Old Dominion University, <sup>2</sup>Georgia College & State University, <sup>3</sup>Arizona State University—Evolutionary significance of fossil *Isoetes* from the Paleocene of North Dakota.
- 3:45 101 **NEUFELD, HOWARD S. AND GUICHUAN HOU.** Appalachian State University—Anatomical distribution of anthocyanins in the stems of several herbaceous plants: Speculations on their functional significance.
- 4:00 102 **HAMISSOU, MIJITABA.** Jacksonville State University—The physiological and oxidative stress responses of *Arabidopsis thaliana* and *Nicotiana tobacum* plants grown in perchlorate-containing water.

- 4:15     103     **ROBERTS, JANET E., MIJITABA HAMISSOU, DAVID R. WHETSTONE AND ROBERT E. CARTER.** Jacksonville State University—Analysis of *Prunus serotina* and *P. alabamensis* (var.) using molecular techniques.
- 4:30     104     **ELLIS, JENNIFER.** Vanderbilt University—Detection of rare paternal inheritance in controlled crosses of the endangered sunflower *Helianthus verticillatus*.
- 4:45     105     **GRANT, STEPHANIE AND LAURA E. DEWALD.** Western Carolina University—Changes in genetic diversity of *Quercus rubra* following different harvesting regimes and the decline of *Castanea dentata* in Western North Carolina.

## Herpetology I

### Dogwood

Presiding: TBA

- 1:45     106     **MCCOARD, NOAH S. AND THOMAS K. PAULEY.** Marshall University—Reproduction of the common ribbonsnake (*Thamnophis sauritus sauritus*) and eastern gartersnake (*Thamnophis sirtalis sirtalis*) in West Virginia.
- 2:00     107     **TUBERVILLE, TRACEY D.<sup>1</sup>, TERRY M. NORTON<sup>2</sup>, TRAVIS C. GLENN<sup>1,3</sup> AND BRADLEY J. WAFFA<sup>4</sup>.** Savannah River Ecology Lab<sup>1</sup>, St. Catherines Island Wildlife Center<sup>2</sup>, University of Georgia<sup>3</sup> and University of the South<sup>4</sup>—Mating system in a gopher tortoise population established through multiple translocations: apparent advantage of prior residence.
- 2:15     108     **BROWN, JOSHUA R. AND JOHN L. CARR.** University of Louisiana at Monroe—Feeding ecology of musk turtles in a North Louisiana bayou.
- 2:30     109     **SAFER, ADAM B.<sup>1</sup> AND MICHAEL S. GRACE<sup>2</sup>.** Armstrong Atlantic State University<sup>1</sup> and Florida Institute of Technology<sup>2</sup>—Infrared imaging in basal boid and pythonid snakes: the relationship between neuroanatomy, pit organ arrangements, and ecology.
- 2:45     110     **DIEFENBACHER, ERIC H. AND THOMAS K. PAULEY.** Marshall University—Comparison of the digit morphology of an arboreal salamander with potential competitors.
- 3:00                     **COFFEE BREAK: VISIT POSTERS**
- 3:30     111     **BEAMER, DAVID A. AND TRIP LAMB.** East Carolina University—A phylogenetic survey of the *Desmognathus fuscus* complex in the southeastern US.

- 3:45 112 **JOHNSON, EMMY AND THOMAS K. PAULEY.** Marshall University—A study on the origin, population size, and natural history of the eastern six-lined racerunner, *Aspidoscelis s. sexlineata*, in West Virginia.
- 4:00 113 **MOORE, MICHAEL K.<sup>1,2</sup>, JULES M. TORAYA<sup>1</sup>, AND V. R. TOWNSEND, JR.<sup>3</sup>** Departments of Earth and Environmental Science<sup>1</sup> and Biology<sup>2</sup>, Mercer University, and Department of Biology<sup>3</sup>, Virginia Wesleyan College—Population decline of the golden tree frog, *Phyllodytes auratus*, on Cerro del Aripo, Trinidad, W. I.: a climate-pathogen connection?
- 4:15 114 **HAMILTON, AMY AND THOMAS PAULEY.** Marshall University—Status of Blanchard's cricket frog, *Acris crepitans blanchardi*, relative to environmental conditions in southern Ohio and western West Virginia.
- 4:30 115 **PICCININNI FRANK AND THOMAS K. PAULEY.** Marshall University—Marbled salamanders *Ambystoma opacum* as "eco-indicators": An overview and some data from a monitoring protocol for ambystomatid salamanders.

## Southeastern Society of Parasitologists II

### Wadsworth

**Presiding: Dr. Chris Hall, Department of Biology, Berry College, Mount Berry GA**

- 1:30 116 **HILSINGER, K. CLAIRE, MIRANDA PAGE AND DR. DANA NAYDUCH.** Georgia Southern University—Analysis of *Skrjabinoptera phrynosoma* burden on stomach-flushed *Phrynosoma platyrhinos*.
- 1:45 117 **GERHOLD, RICHARD W.<sup>1</sup>, ANDREW B. ALLISON<sup>1</sup> AND JOHN F. ALDERETE<sup>2</sup>.** Southeastern Cooperative Wildlife Disease Study, College of Veterinary Medicine, The University of Georgia<sup>1</sup> and The University of Texas Health Science Center at San Antonio<sup>2</sup>—Failure to detect intracellular double-stranded RNA viruses in *Trichomonas gallinae* and identification of a novel sequence of a *Trichomonas vaginalis* virus.
- 2:00 118 **DENNIS, MATT, HOWARD WHITEMAN AND CLAIRE FULLER.** Murray State University—Encapsulation ability of dragonfly nymphs, *Plathemis Lydia*, is affected by water pollution.
- 2:15 119 **CARLETON, RENÉE E.<sup>1</sup> AND MICHAEL J. YABSLEY<sup>2</sup>.** Berry College<sup>1</sup> and University of Georgia<sup>2</sup>—Parasites of eastern bluebirds (*Sialia sialis*): A review and survey of a population nesting within a grass-dominated agricultural habitat in Georgia.
- 2:30 120 **FAULKNER, CHARLES T.<sup>1</sup>, ALYCIA CHAPMAN<sup>1</sup>, RANDALL JUNGE<sup>2</sup>, GRAHAM CRAWFORD<sup>3</sup>, AND CHARLES WELCH<sup>4</sup>.** <sup>1</sup>University of Tennessee College of Veterinary Medicine, <sup>2</sup>St. Louis Zoo, <sup>3</sup>San Francisco Zoo, and <sup>4</sup>The Madagascar Fauna Group—Host distribution of endoparasitic helminths of Malagasy lemuroids.

- 2:45    121    **KYLE, DENNIS E.,<sup>1-3</sup> KOSOL YONGVANITCHIT<sup>3</sup>, JENNIFER M. PETERS,<sup>4</sup> NANHUA CHEN,<sup>3</sup> MICHELLE GATTON,<sup>5</sup> QIN CHENG,<sup>4</sup> AND H. KYLE WEBSTER.<sup>2,3</sup>** University of South Florida,<sup>1</sup> Walter Reed Army Institute of Research,<sup>2</sup> Armed Forces Institute for Medical Sciences,<sup>3</sup> Australian Army Malaria Institute,<sup>4</sup> and Queensland Institute of Medical Research.<sup>5</sup>—Artesunate and dihydroartemisinin induce dormancy in ring stages of *Plasmodium falciparum*: implications for a mechanism of recrudescence.
- 3:00            **COFFEE BREAK: VISIT POSTERS**
- 3:30    122    **WEST, ANDREW<sup>1</sup>, MARIELLE POSTAVA-DAVIGNON<sup>2</sup>, REBECA ROSENGAUS<sup>2</sup> AND CLAIRE FULLER<sup>1</sup>.** Murray State University<sup>1</sup> and Northeastern University<sup>2</sup>—Susceptibility to fungal infection in the Caribbean termite is affected by habitat and colony of origin.
- 3:45    123    **PUNG, OSCAR J.<sup>1</sup>, MICHAEL WALKER<sup>2</sup> AND WHITNEY L. BARFIELD<sup>1</sup>.** Georgia Southern University<sup>1</sup> and Armstrong Atlantic State University<sup>2</sup>—The trematode *Microphallus turgidus* cultured *in vitro* produces eggs infective to hydrobiid snails.
- 4:00    124    **LANDERS, STEPHEN C.** Troy University—Staining improvements for apistome ciliates using a modified Chatton-Lwoff technique.
- 4:15    125    **NAYDUCH, DANA.** Georgia Southern University—Temporal progression of *Herpetomonas muscarum* (Kinetoplastida: Trypanosomatidae) in the midgut of the housefly, *Musca domestica* (Diptera: Muscidae).
- 4:30    126    **STROBL, JEANNINE<sup>1</sup>, RANA NAGARKATTI<sup>2</sup> AND DHARMENDAR RATHORE<sup>2</sup>.**<sup>1</sup>Biomedical Sciences, Edward Via Virginia College of Osteopathic Medicine, and <sup>2</sup>Virginia Bioinformatics Institute, Blacksburg, VA—Nullscript, an apicomplexan selective inhibitor.

## Symposium II

### Research at Undergraduate Institutions: Pitfalls and Possibilities

#### Croft

**Presiding: William Ensign, Kennesaw State University**

- 1:45    127    **ENSIGN, WILLIAM, RONALD MATSON AND SCOITT REESE.** Department of Biology and Physics, Kennesaw State University, Kennesaw, GA—Risk and reward in undergraduate research in the Southeast: A survey of institutional support at southeastern institutions.
- 2:00    128    **PILGRIM, MELISSA.** Natural Sciences and Engineering, University of South Carolina Upstate—Choosing research at an undergraduate institution: bridging the gap between research and teaching universities.
- 2:15    129    **GOWAN, CHARLES.** Biology Department, Randolph-Macon College—Incorporating problem-based learning into traditional courses as a way to mentor students in research.

- 2:30 130 **DORCAS, MICHAEL E. AND STEVEN J. PRICE.** Davidson College—Herpetology at Davidson: development of an effective, multi-disciplinary undergraduate-based research program.
- 2:45 131 **HANEY, DENNIS C.,<sup>1</sup> GREG P. LEWIS<sup>1</sup> AND C. BRANNON ANDERSEN<sup>2</sup>.** <sup>1</sup>Biology Department and <sup>2</sup>Earth and Environmental Sciences Department, Furman University—How interdisciplinary collaboration enhances research productivity at an undergraduate institution.
- 3:00 **COFFEE BREAK: VISIT POSTERS**
- 3:30 132 **MCELROY, THOMAS AND PAULA JACKSON.** Department of Biology and Physics, Kennesaw State University—Research for the masses: conducting undergraduate research when N exceeds 1000
- 3:45 133 **FARRELL, T. M.** Stetson University—The critical and devalued role of undergraduate research in the tenure and promotion process.
- 4:00 134 **JORGENSEN, DARWIN.** Roanoke College, Virginia—Support, encouragement, and mentoring of beginning faculty members at undergraduate institutions.
- 4:15 **PANEL DISCUSSION AND QUESTION/ANSWER**

## Genetics and Cell Biology I

Daniel Morgan A

Presiding: TBA

- 1:45 135 **BLENDIA, ANNA V.<sup>1</sup>, WILLIAM P. WECHTER<sup>2</sup>, GREGORY L. REIGHARD<sup>1</sup>, AND ALBERT G. ABBOTT<sup>1</sup>.** Clemson University<sup>1</sup> and USDA-ARS, Vegetable Laboratory, Charleston<sup>2</sup>—Peach tree short life syndrome and new approaches to solve the problem.
- 2:00 136 **WEEKS, KATHERINE F.<sup>1</sup>, JAMES L. HAMRICK<sup>2</sup> and JOAN L. WALKER<sup>3</sup>.** Clemson University<sup>1</sup>, University of Georgia<sup>2</sup> and U.S. Forest Service<sup>3</sup>—Genetic diversity and structure in *Macbridea caroliniana*, a rare floodplain mint.
- 2:15 137 **TALLEY, JENNEL AND KATHERINE FRIEDMAN.** Vanderbilt University—Examining the role of the telomerase subunit Est3p in *Saccharomyces cerevisiae*.
- 2:30 138 **EVANS, ELIZABETH AND DWAYNE WISE.** Mississippi State University—CHO-Human hybrid cells as models for chromosome nondisjunction.
- 2:45 139 **JOHNSON, MARY AND DWAYNE WISE.** Mississippi State University—The spindle checkpoint in cells that undergo mitosis without chromosome replication.

3:00 **COFFEE BREAK: VISIT POSTERS**

- 3:30 140 **IGLESIA, MICHAEL<sup>1</sup>, APRIL MACKELLAR<sup>2</sup> AND ARNO GREENLEAF<sup>2</sup>.** Guilford College<sup>1</sup> and Duke University Medical Center<sup>2</sup>—Binding interactions elucidate function of yeast transcription factor Iws1.
- 3:45 141 **THATCHER, ELIZABETH J., IMA PAYDAR AND JAMES G. PATTON.** Vanderbilt University—Regulation of vertebrate regeneration by microRNAs.
- 4:00 142 **HENDERSHOTT, CHRISTINE E.** East Tennessee State University Quillen College of Medicine, Converse College—Alpha-tocopheryl succinate, a vitamin E derivative, induces apoptosis in LNCaP cells, a prostate cancer cell line.
- 4:15 143 **CARIVEAU, MICKAEL<sup>1,2</sup> AND BO XU<sup>1</sup>.** Mount Olive College<sup>1</sup> and Southern Research Institute<sup>2</sup>—Combination therapy of Clofarabine with radiation: Inhibiting DNA repair and increasing local tumor response.

**FRIDAY APRIL 18, 2008**  
**MORNING SESSION**

**Plant Ecology II**

**Azalea A**

**Presiding: TBA**

- 8:15 144 **PERLMUTTER, GARY B.** North Carolina Botanical Garden—Lichen biota of Mason Farm Biological Reserve.
- 8:30 145 **METHVEN, ANDREW, CHARLES PEDERSON, AND VINCE HUSTAD.** Eastern Illinois University—Site variation in corticolous lichen assemblages on sweet bay in coastal floodplain forests.
- 8:45 146 **MATTHEWS, ELIZABETH R.<sup>1</sup>, ROBERT K. PEET<sup>1</sup>, ALAN S. WEAKLEY<sup>1</sup>, AND THOMAS R. WENTWORTH<sup>2</sup>.** University of North Carolina at Chapel Hill<sup>1</sup>, North Carolina State University<sup>2</sup>—Alluvial plant communities of Piedmont brown-water rivers.
- 9:00 147 **MOORE, JAMES E. AND SCOTT B. FRANKLIN.** The University of Memphis—The effects of hydrological regimes on Mississippi River Island plant species richness.
- 9:15 148 **MICHOT, ALLEN III<sup>1</sup>, CHRISTOPHER A. ADAMS<sup>2</sup>, AND RICCARDO FIORILLO<sup>3</sup>.** University of West Georgia<sup>1</sup>, King College<sup>2</sup>, and University of Louisiana-Monroe<sup>3</sup>—Seed germination ecology of *Xanthium strumarium* in a vernal pond habitat.

- 9:30 149 **BLECHA, STACI B. AND FRANK P. DAY.** Old Dominion University—Inter-island variability in above and belowground plant biomass in interior marshes on the Virginia barrier islands.
- 9:45 150 **SHAFFER, JUSTIN K. AND FRANK P. DAY.** Old Dominion University—Interisland variability of dune plant community biomass on Virginia's Eastern Shore.
- 10:00 **COFFEE BREAK: VISIT POSTERS**
- 10:30 151 **HANCOCK, THOMAS E. AND WILLIAM K. SMITH.** Wake Forest University—Plant strategies for mediating water stress in a North Carolina barrier beach environment.
- 10:45 152 **SUGAR, JAMES<sup>1</sup>, JON STUCKY<sup>1</sup>, LISA KELLY<sup>2</sup>, AND LEON JERNIGAN<sup>2</sup>.** North Carolina State University<sup>1</sup> and University of North Carolina at Pembroke<sup>2</sup>—Vascular flora, plant community types, soils and water tables in clay-based Carolina bays in North Carolina.
- 11:00 153 **RAMPRASAD, VIJAY AND BRIAN C. McCARTHY.** Ohio University—Spatial patterns of understory vegetation in a mixed-mesophytic old-growth forest.

## Genetics and Cell Biology II

### Dogwood

Presiding: TBA

- 8:30 154 **CHAPMAN, MISTY A., MARK E. MEADE, BENJIE G. BLAIR AND CHARLES P. OLANDER.** Jacksonville State University—Evaluation of morphological and physiological changes in *Tetrahymena pyriformis* for the in vitro assessment on the effects of phloxine B.
- 8:45 155 **OREBAUGH, CLINTON<sup>1</sup>, SCOTT HARVEY<sup>2</sup>, TOM HOLLIS<sup>2</sup>, YANICK CROW<sup>3</sup> AND FRED PERRINO<sup>2</sup>.** Guilford College<sup>1</sup>, Wake Forest University<sup>2</sup> and Leeds Institute of Molecular Medicine<sup>3</sup>—TREX1 mutations in autoimmune disease.
- 9:00 156 **PROUTY, DALENE, MEGAN BURDETTE, BELDA THOMAS, HATICE NEVAL ERTÜRK, AND RICHARD KEEN.** Converse College—Effects of caffeine on temporal perception.
- 9:15 157 **SHORTER, KIM AND H. NEVAL ERTÜRK.** Converse College—An investigation of the genotoxic effects of the pesticide Sevin.
- 9:30 158 **SHIRAZI, KATAYUN T.** Emory University—The influence of herbs on medication: a study of the effect of ginseng, goldenseal, and ephedra on the effectiveness of lidocaine in *Daphnia magna*.

- 9:45 159 **AGHORAM, KARTHIK<sup>1</sup>, JOHN A. MECHAM<sup>1</sup>, WALDA A. POWELL AND MICHAEL OTIENO<sup>2</sup>.** Meredith College<sup>1</sup> and Kenyatta University<sup>2</sup>—Identification of an HIV protease inhibitor in tuberous roots of the plant *Tylosema fassoglensis*.

### **Southeastern Society of Parasitologists III**

#### **Wadsworth**

**Presiding: Dr. Vince Connors, Department of Biology, University of South Carolina Upstate, Spartanburg SC**

- 9:15 160 **BURON, ISAURE de <sup>1</sup>, SCOTT FRANCE <sup>2</sup>, WILLIAM A. ROUMILLAT<sup>3</sup>, LAM TSOI <sup>4</sup>, VINCENT A. CONNORS<sup>5</sup>, AND TIMOTHY BRYAN<sup>1</sup>.** College of Charleston, <sup>2</sup>University of Louisiana, Lafayette, <sup>3</sup> South Carolina Department of Natural Resources, <sup>4</sup> Medical University of South Carolina, <sup>5</sup> University of South Carolina Upstate—The philometrids of the southern flounder: An update.
- 9:30 161 **HERRON, BROOKE, TIFFANY G. BAKER, AND ISAURE DE BURON,** College of Charleston, <sup>2</sup> Medical University of South Carolina—Population dynamics of a monogenean parasite of the esophagus of the Atlantic croaker, *Micropogonias undulatus*, in the South Atlantic Bight and inshore waterways.
- 9:45 162 **LAURSEN, JEFF, AND ANDREW CLAXTON.** Eastern Illinois University—Impact of coal mine effluent on fish parasite assemblages in southern Illinois streams.
- 10:00 **COFFEE BREAK: VISIT POSTERS**
- 10:30 163 **ZELMER, DEREK A.<sup>1</sup> AND THOMAS R. PLATT<sup>2</sup>.** University of South Carolina Aiken<sup>1</sup> and St. Mary's College<sup>2</sup>—Structure and similarity of helminth communities of six species of Australian turtles.
- 10:45 164 **ROSYPAL, ALEXA C.<sup>1</sup>, J. A. CORTÉS-VECINO<sup>2</sup>, SOLANGE M. GENNARI<sup>3</sup>, J.P. DUBEY<sup>4</sup>, RICHARD R. TIDWELL<sup>1</sup>, AND DAVID S. LINDSAY<sup>5</sup>.** <sup>1</sup>University of North Carolina at Chapel Hill, <sup>b</sup>Universidad Nacional de Colombia-Sede Bogotá, Bogota, Colombia, <sup>c</sup>Departamento de Medicina Veterinária Preventiva e Saúde Animal, USP, São Paulo, SP, Brazil, <sup>d</sup>United States Department of Agriculture, Animal Parasitic Diseases Laboratory, Beltsville, MD, <sup>5</sup>Virginia Tech—Prevalence of antibodies to of *Leishmania infantum* and *Trypanosoma cruzi* in dogs from urban areas of Brazil and Colombia.



**Plant Systematics II****Croft****Presiding: TBA**

- 8:45 165 **OGEZ, BRITTNEY D. AND DOUGLAS P. JENSEN.** Converse College—Floristic diversity within the upper Cretaceous Middendorf beds of eastern South Carolina.
- 9:00 166 **BUSH, CATHERINE M. AND KATHLEEN KRON.** Wake Forest University—The phylogeny, biogeography and morphological evolution of the Gaultherieae (Ericaceae).
- 9:15 167 **BECK, JAMES B.** Duke University—The phylogeny of *Selenia* (Brassicaceae) and its relation to the origin of the southeastern U.S. cedar glade flora.
- 9:30 168 **GILLESPIE, EMILY L AND KATHLEEN A KRON.** Wake Forest University—Evolution and biogeography of the genus *Kalmia* (Ericaceae: Phylloidoceae).
- 9:45 169 **RISK, ALLEN C.** Morehead State University—*Atrichum* (Polytrichaceae) of the Cumberland Plateau: taxonomy, ecology, and distribution.
- 10:00 **COFFEE BREAK: VISIT POSTERS**
- 10:30 170 **HORN, CHARLES N.** Newberry College—Preliminary studies on hybridization between *Asimina triloba* (common pawpaw) and *Asimina parviflora* (dwarf pawpaw).
- 10:45 171 **RAVEILL, JAY A., SELENE S. NIKAIDO AND ANDREA L. DIXON.** University of Central Missouri—*Desmodium humifusum*: a hybrid or a species?

**Animal Ecology II****Daniel Morgan A****Presiding: TBA**

- 8:15 172 **JANSON, ERIC M. AND PATRICK ABBOT.** Vanderbilt University—Sterol usage in the *Solidago* galling midge *Asteromyia carbonifera* (Diptera: Cecidomyiidae): fungal symbiont as a source of sterols.
- 8:30 173 **RITLAND, DAVID B.** Erskine College—The palatability/discrimination function and the evolution of accurate mimicry.
- 8:45 174 **EXTINE, JENNIFER L. AND LAURA E. DEWALD.** Western Carolina University—Comparison of potential habitat among golf courses in western North Carolina.

- 9:00 175 **DILUZIO, NICHOLAS A., MARK T. STANBACK, AUSTIN MERCADANTE AND JEAN OLBERT.** Davidson College—The effects of the threat of predation on nest site selection in Eastern Bluebirds (*Sialia sialis*).
- 9:15 176 **FALCONE, JOSEPHINE F. AND LAURA E. DEWALD.** Western Carolina University—Effects of a hemlock woolly adelgid (*Adelges tsugae*) insecticide treatment on arthropod community diversity and food availability for insectivorous birds in Great Smoky Mountains National Park.
- 9:30 177 **BROWN, CHRISTOPHER G. AND DANIEL J. FUNK.** Vanderbilt University—The effects of fecal cases on the survival of *Neochlamisus* leaf beetles (Coleoptera: Chrysomelidae): a trade-off in extreme humidity conditions.
- 9:45 178 **GREENBERG<sup>1</sup>, CATHRYN H., T.G. FORREST<sup>2</sup> AND THOMAS WALDROP<sup>1</sup>.** USDA Forest Service, Southern Research Station<sup>1</sup>; University of North Carolina at Asheville<sup>2</sup>—Effect of fuel reduction treatments on ground-dwelling macroarthropod communities in a southern Appalachian upland hardwood forest.
- 10:00 **COFFEE BREAK: VISIT POSTERS**
- 10:30 179 **CARTER, ELOISE<sup>1</sup>, STEVE BAKER<sup>1</sup>, SARAH PARSONS<sup>2</sup> AND DAVID WAGNER<sup>3</sup>.** Oxford<sup>1</sup> and Emory College<sup>2</sup> of Emory University, and University of Connecticut<sup>3</sup>—Ecology and life history of *Stiria rugifrons*: a cryptic caterpillar utilizing *Helianthus porteri* on granite outcrops.
- 10:45 180 **NASIR, AMJAD M.<sup>1</sup>, FLORENCE A. OKENKPU<sup>1</sup>, JOHN R. HISEY<sup>1, 2</sup>, POPOH A. ATAIRU<sup>1</sup>, MICHAEL L. KENNEDY<sup>2</sup>, AND BRIAN D. CARVER<sup>2, 3</sup>.** Lee University<sup>1</sup>, The University of Memphis<sup>2</sup>, and Freed-Hardeman University<sup>3</sup>—A novel use of lineages in the analysis of effective population sizes of a solitary carnivore.
- 11:00 181 **ATAIRU, POPOH A.<sup>1</sup>, JOHN R. HISEY<sup>1,2</sup>, MICHAEL L. KENNEDY<sup>2</sup>, AND BRIAN D. CARVER<sup>2,3</sup>.** Lee University<sup>1</sup>, The University of Memphis<sup>2</sup>, and Freed-Hardeman University<sup>3</sup>—Lineage effects on inbreeding coefficients of a solitary carnivore.

## Teaching Biology

Daniel Morgan B

Presiding: TBA

- 8:15 182 **RAYBURN, JAMES R.** Jacksonville State University—The use of a student response system for teaching general biology.
- 8:30 183 **WELCH, NICOLE TURRILL.** Mississippi University for Women—Do students in redesigned introductory biology courses perform as well as those in traditional classroom offerings of the same course?

- 8:45 184 **SAUTERER, ROGER.** Jacksonville State University—Use of modified amphibian biotoxicity assays in instructional laboratories.
- 9:00 185 **HERR, J. M., JR.** University of South Carolina-Columbia—A technique for the study of vascular plant anatomy from unstained whole mounts and thick sections.
- 9:15 186 **NELSON, DIANE R.<sup>1</sup>, BONNIE PARKS<sup>1</sup> AND JEANNE ZAVADA<sup>2</sup>.** East Tennessee State University<sup>1</sup> and Natural History Museum and Gray Fossil Site<sup>2</sup>—Educational opportunities at the Natural History Museum and Gray Fossil Site.
- 9:30 187 **KOSAL, ERICA<sup>1</sup>, PEARL R. FERNANDES<sup>2</sup>, and JOHN MECHAM<sup>3</sup>.** <sup>1</sup>North Carolina Wesleyan College, <sup>2</sup>University of South Carolina Sumter, and <sup>3</sup>Meredith College—Improving science education through globalization.
- 9:45 188 **JONES, RONALD L. AND HUMBERTO JIMENEZ SAA.** Eastern Kentucky University and Tropical Science Center, San Jose, Costa Rica—Opportunities for teaching and research at *Los Cusingos* Neotropical Bird Sanctuary, Costa Rica.
- 10:00 **COFFEE BREAK: VISIT POSTERS**

### Plant Ecology III

#### Azalea B

Presiding: TBA

- 1:45 189 **RAYNER, DOUGLAS A. AND DANIEL S. HENDERSON.** Wofford College—Response of a suburban bottomland forest to removal of invasive plants.
- 2:00 190 **KUPPINGER, DANE M.** Sewanee University—Invasion of the exotic *Paulownia tomentosa* at Linville Gorge and changes in its habitat distribution over time.
- 2:15 191 **MCQUAIDE, JOHNATHAN AND JAMES FRALISH.** Southern Illinois University Carbondale—Change in forest composition and structure of compositionally stable forest stands at Land Between The Lakes National Recreational Area, KY and TN: 1988-2007.
- 2:30 192 **SCHROEDER, RACHEL E.<sup>1</sup>, FRANK P. DAY<sup>1</sup>, DANIEL B. STOVER<sup>2</sup>, JOHN R. BUTNOR<sup>3</sup> AND BERT G. DRAKE<sup>4</sup>.** Old Dominion University<sup>1</sup>, Florida Gulf Coast University<sup>2</sup>, U.S. Forest Service<sup>3</sup>, and Smithsonian Environmental Research Center<sup>4</sup>—Coarse root biomass and architecture under elevated CO<sub>2</sub> in a Florida scrub-oak ecosystem determined by ground-penetrating radar.
- 2:45 193 **McCARTHY, BRIAN C.** Ohio University—American chestnut restoration and mineland reclamation: Bring technologies together.

3:00 **COFFEE BREAK: VISIT POSTERS**

- 3:30 194 **FRALISH, JAMES AND MIR FERDOUS.** Southern Illinois University—Predicting *Quercus alba* site index from measurable soil water, nutrient, and topographic characteristics: what should be measured/calculated?
- 3:45 195 **GIUNTA, ANTHONY JR. AND DANNY J. GUSTAFSON.** The Citadel—Evaluating spatial genetic structure of an endangered dioecious shrub (*Lindera melissifolia*) in South and North Carolina.
- 4:00 196 **SCOTT, GERALD R., AND BRIAN C. MCCARTHY.** Ohio University—Vegetation differences between stands infested with *Ailanthus altissima* (P. Mill.(Swingle) and those that are uninfested in Southern Ohio mixed oak forests.
- 4:15 197 **HERALD, DOUGLAS, AND RAYMOND PETERSEN.** Howard University—The role of Diptera larvae in controlling *Euglena* concentrations in the pitchers of *Sarracenia purpurea* L.
- 4:30 198 **DEVINEY, DAVID E., JASON HARKEY, JOHN HARKEY AND HOWIE NEUFELD.** Appalachian State University—Influence of trichomes on the spectral characteristics of leaves on the purple velvet plant (*Gynura aurantiaca*) in the visible and near-IR wavelengths.

**Plant Systematics III****Daniel Morgan A****Presiding: TBA**

- 1:45 199 **MCKINNEY, LANDON<sup>1</sup> AND LELA MCKINNEY<sup>2</sup>.** ASC Group, Inc.<sup>1</sup> and Erlanger, Kentucky<sup>2</sup>—The Violaceae of the Great Smoky Mountains National Park.
- 2:00 200 **DALEY, DANE<sup>1</sup>, PAUL THREADGILL<sup>1</sup> AND DWAYNE ESTES<sup>2</sup>.** Maryville College<sup>1</sup> and Austin Peay State University<sup>2</sup>—The *Asarum canadense* (Aristolochiaceae) complex in Tennessee.
- 2:15 201 **MUSSELMAN, LYTTON J. AND J. F. BOLIN.** Department of Biological Sciences, Old Dominion University—Branched broomrape, *Orobancha ramose* (Orobanchaceae), in the Southeastern United States.
- 2:30 202 **BRANNON, JEFFREY M. AND JOHN B. NELSON.** University of South Carolina—Vascular plants and landscape inventory of Aiken State Natural Area, Aiken County, South Carolina.
- 2:45 203 **CELY, WILLIAM E. AND JOHN B. NELSON.** University of South Carolina—A survey of the vascular flora of Sesquicentennial State Park, Richland County, South Carolina.
- 3:00 **COFFEE BREAK: VISIT POSTERS**

- 3:30 204 **BARGER, T. WAYNE, BRIAN HOLT, AND JOHN TRENT.** State Lands Division, AL-DCNR—Preliminary Survey of the Vascular Flora of the Indian Mountain Forever Wild Tract, Cherokee County, AL.
- 3:45 205 **MCINTOSH, AMY V. AND RONALD L. JONES.** Eastern Kentucky University—The vascular flora of Kentenia State Forest additions (Greene, Cupp and Golden Tracts), Pine Mountain, Kentucky.
- 4:00 206 **McMULLEN, CONLEY K., BENJAMIN A. GAHAGEN AND DOUGLAS W. McPHERSON.** Dept. of Biology James Madison University—Ongoing floristic projects at James Madison University - Edith J. Carrier Arboretum and Smith Creek Restoration Area.
- 4:15 207 **JONES, RONALD L. AND HUMBERTO JIMENEZ SAA.** Eastern Kentucky University and Tropical Science Center, San Jose, Costa Rica—Plant life of *Los Cusingos* neotropical bird sanctuary and the Valle del General, Costa Rica.

## Herpetology II

### Dogwood

Presiding: TBA

- 1:45 208 **BUHLMANN, KURT A.<sup>1</sup>, DENO KARAPATAKIS<sup>1,2</sup>, THOMAS B. AKRE<sup>1,3</sup>, JOHN B. IVERSON<sup>4</sup>, AND J. WHITFIELD GIBBONS<sup>1</sup>.** Savannah River Ecology Lab<sup>1</sup>, Savannah River National Laboratory<sup>2</sup>, Longwood University<sup>3</sup> and Earlham College<sup>4</sup>—A global analysis of tortoise and freshwater turtle distributions with identification of regional priority conservation areas.
- 2:00 209 **CLINE, GEORGE, CHRIS EDMONSON, AND ROBERT CARTER.** Jacksonville State University—Analysis of southeastern herpetological communities: snakes.
- 2:15 210 **PAWLIK, KATHRYN R. AND THOMAS K. PAULEY.** Marshall University—West Virginia streamside salamander guilds and environmental variables.
- 2:30 211 **PICCININNI, FRANK AND THOMAS K. PAULEY.** Marshall University—The power of observations: case studies from a monitoring protocol for ambystomatid salamanders.
- 2:45 212 **O'KELLEY, JEFFREY J.<sup>1</sup>, BENJIE G. BLAIR<sup>2</sup> AND CHRIS MURDOCK<sup>3</sup>.** Jacksonville State University—Analysis and classification of intestinal microbiota of *Plethodon glutinosus* (the slimy salamander) by 16S RNA sequencing.
- 3:00 **COFFEE BREAK: VISIT POSTERS**

- 3:30     213     **BALDWIN, TIMOTHY E<sup>1</sup>. AND THOMAS K. PAULEY<sup>2</sup>.** Alabama A&M University<sup>1</sup>, Marshall University<sup>2</sup>—Habitat selection of rough greensnakes and smooth greensnakes (*Opheodrys aestivus* and *Opheodrys vernalis*) in West Virginia.
- 3:45     214     **SCHNEIDER, AMY AND THOMAS K. PAULEY.** Marshall University—A continued study of the use of created ponds for amphibian breeding in fragmented forested areas.
- 4:00     215     **BALLENGER, JARED J., LAUREN M. HORTON, WILL W. REID AND MELISSA A. PILGRIM.** University of South Carolina Upstate—Assessing the use of artificial structure in a fragmented landscape: herpetofauna as a case study.

### **Symposium III--The Southeast Regional Knowledge Partnership: From Regional Relevance to Global Significance**

#### **Azalea A**

**Presiding: Frank Gilliam, Marshall University**

- 2:00             **GILLIAM, FRANK.** Marshall University—Introduction.
- 2:15     216     **COVICH, ALAN P.** University of Georgia—Connecting stakeholders views on ecosystem services in the Southeast.
- 2:30     217     **MELILLO, JERRY M.** The Ecosystems Center, Marine Biological Laboratory—The value of regional communication with stakeholders.
- 2:45     218     **SHARITZ, REBECCA R.** Savanna River Ecology Laboratory—The future of freshwater wetlands in the Southeastern United States.
- 3:00             **COFFEE BREAK: VISIT POSTERS**
- 3:30     219     **CHRISTENSEN, NORMAN L.** Duke University—The future of Southeastern forests.
- 3:45     220     **WEAR, DAVID N.** Southern Research Station, US Forest Service—The Southern Forest Futures Project: Forecasting and sustainability.
- 4:00             **PANEL DISCUSSION AND QUESTION/ANSWER**

ASB POSTER SESSIONS

HERITAGE GRAND BALLROOM

	<u>Poster Session I (4/17)</u>	<u>Poster Session II (4/18)</u>
Poster Setup:	8:00-9:00 am	8:00-9:00 am
Posters Displayed:	9:00 am–4:00 pm	9:00 am–4:00 pm
Presenters stand by posters:	10:00-11:00 am; Odd # posters 2:30-3:30 pm; Even # posters	10:00-11:00 am; Odd # posters 2:30-3:30 pm; Even # posters
Poster take-down:	4:00-5:00 pm	3:30-4:00 pm

POSTER SESSION I – THURSDAY, APRIL 17

Animal Ecology I

- P1      **LOBATO, D. N., C. MORGAN WILSON, AND RENEE D. GODARD.** Hollins University—Intermittent incubation and microbial growth on eggs of eastern bluebird (*Sialia sialis*).
- P2      **SESLER, CHERYL L., ROBERT A. CARR, AND H. DAWN WILKINS.** University of Tennessee at Martin—Use of TreeTop Peeper™ to investigate cavity succession in a fragmented habitat.
- P3      **JACKSON, JEFFREY A. AND STEPHEN C. RICHTER.** Eastern Kentucky University—Genetic variation and viability of gopher tortoise populations at a military installation in southern Mississippi.
- P4      **RICE, CHRIS L. AND KIM MARIE TOLSON.** University of Louisiana at Monroe—Roost site selection by two Vespertilionid bats (*Myotis austroriparius* and *Corynorhinus rafinesquii*) in a northeast Louisiana bottomland hardwood forest.
- P5      **TRIERWEILER, ANNETTE AND TRAVIS PERRY.** Furman University—Using GIS to characterize cougar (*Puma concolor*) movement and activity for management and conservation.
- P6      **RAE, JOHN G.** Francis Marion University—Distributional relationships of major taxonomic groups of interstitial lotic animals with one another and their habitats.
- P7      **HOBBS III, HORTON H<sup>1</sup> AND ERIN R. HAZELTON<sup>2</sup>.** Wittenberg University<sup>1</sup>, Ohio Department of Natural Resources, Division of Natural Areas and Preserves<sup>2</sup>—The limestone and dolomite cave bioinventory project in Ohio.

### Herpetology I

- P8 **PRICE, STEVEN J.<sup>1,2</sup> AND MICHAEL E. DORCAS<sup>2</sup>.** Wake Forest University<sup>1</sup> and Davidson College<sup>2</sup>—The Carolina Herp Atlas: A citizen-science approach to reptile and amphibian monitoring.
- P9 **ESKEW, EVAN A.<sup>1,2</sup>, JOHN D. WILLSON<sup>2</sup> AND CHRISTOPHER T. WINNE<sup>2</sup>.** Davidson College<sup>1</sup>, University of Georgia, Savannah River Ecology Laboratory<sup>2</sup>—Ambush site selection and ontogenetic shifts in foraging strategy in a semi-aquatic pit viper, the Eastern cottonmouth (*Agkistrodon piscivorus*).
- P10 **REAM, JOSHUA T. AND A. FLOYD SCOTT.** Austin Peay State University—Preliminary observations on habitat preference, movement patterns, and survival of introduced juvenile Alligator Snapping Turtles (*Macrochelys temminckii*) in Fayette County, Tennessee.
- P11 **ROHRBAUGH, LINDSAY<sup>1</sup> AND PAUL V. CUPP, JR.<sup>2</sup>.** Eastern Kentucky University—Analysis of physicochemical habitat characteristics and turtle assemblage of two pond size classes in Fayette and Madison County, Kentucky.
- P12 **PITTMAN, SHANNON AND MICHAEL DORCAS.** Davidson College—Habitat selection and thermal ecology of the bog turtle (*Glyptemys muhlenbergii*) in a North Carolina Piedmont meadow bog.
- P13 **JENDREK, AMORY L., JOY M. HESTER, STEVEN J. PRICE AND MICHAEL E. DORCAS.** Davidson College—Seasonal body temperatures of resident and relocated eastern box turtles (*Terrapene carolina*) in North Carolina.
- P14 **CONNETTE, GRANT M., STEVEN J. PRICE, AND MICHAEL E. DORCAS.** Davidson College—Abiotic factors influencing activity in stream salamanders.
- P15 **MORGAN, COURTNEY A., DOROTHY H. LLOYD AND DAVID A. BEAMER.** East Carolina University—The big picture on tiny salamanders: A phylogenetic survey of dwarf salamanders.
- P16 **WILLIAMS, JOSHUA S., CAROL M. BUKER, ALFRED H. KOKWARO, AND STEPHEN C. RICHTER.** Eastern Kentucky University—Evolutionary pattern of mitochondrial genome order in amphibians.

### Ichthyology

- P17 **SCULL, GREGORY AND MARK MEADE.** Jacksonville State University—Hypoxia tolerance of creek chub, *Semotilus atromaculatus*.
- P18 **TURNER, JOSHUA, MARK MEADE, AND GREGORY SCULL.** Jacksonville State University—Occurrence of holiday darter, *Etheostoma brevirostrum*, in Talladega National Forest.



- P19 **HOLLADAY, CHASE G. AND RICCARDO A. FIORILLO.** University of Louisiana, Monroe—Fish assemblage of Sicily Island Hills Wildlife Management Area in central Louisiana.
- P20 **MCMAHAN, CALEB D. AND KYLE R. PILLER.** Southeastern Louisiana University—Molecular systematics of Mexican populations of mountain mullet, *Agonostomus monticola* (Teleostei: Mugilidae).
- P21 **MEADE, MARK, AL NICHOLS, AND JENNIFER WALLACH.** Jacksonville State University—Mercury along the Coosa River system.

#### **Aquatic Wetland, and Marine Management**

- P22 **CAMPO, JESSICA M., JACQUELINE D. ROQUEMORE AND ROBERT B. ATKINSON.** Christopher Newport University—Floristic analysis of vascular flora in six restored wetlands in Virginia.
- P23 **OGASAWARA, MASAMICHI.** Clemson University—Plant coverage and biomass analysis of herbaceous vegetation in South Carolina tidally influenced freshwater forested wetlands.
- P24 **MEADOR, JEFFREY A. AND ROBERT B. ATKINSON.** Christopher Newport University—Success in restoration of a 31-hectare forested wetland: a third party perspective.
- P25 **HURLEY, STEPHANIE L., HERMAN W. HUDSON, III, JACQUELINE ROQUEMORE, AND ROBERT B. ATKINSON.** Christopher Newport University—The importance of seed sources in restoration of forested wetlands.
- P26 **SWEET, KRISTA C.<sup>1</sup>, HERMAN W. HUDSON III<sup>2</sup>, AND ROBERT B. ATKINSON<sup>3</sup>.** The Center for Wetland Conservation, Christopher Newport University—The role of site selection and goal setting in restoration of prior converted wetlands.
- P27 **SOOS, ROBERT, PEARL R. FERNANDES, AND JEFFREY STEINMETZ.** University of South Carolina Sumter, SC—Water quality monitoring of the Pocatigo Swamp.
- P28 **STONE, PETER<sup>1</sup>, MARIE-THERES GRAF<sup>2</sup>, MARGO SCHWADRON<sup>3</sup>, MICHAEL ROSS<sup>4</sup> AND GAIL CHMURA<sup>2</sup>.** SC Dept. Health and Environmental Control<sup>1</sup> McGill University<sup>2</sup> US National Park Service<sup>3</sup> Florida International University<sup>4</sup>—Prehistoric disturbances and shifts in southern Everglades plant communities.

#### **Invertebrate Zoology and Entomology**

- P29 **BRYANT, MATTHEW AND DARWIN JORGENSEN.** Roanoke College—The relationship between gill chamber hydrostatic pressure and the gill circulation in the Atlantic blue crab, *Callinectes sapidus*.

- P30 **STANTON, DANIEL AND JULIAN P.S. SMITH III.** Dept. of Biology, Winthrop University—Melatonin alters fissioning rate in *Stenostomum virginianum* (Platyhelminthes, Catenulida).
- P31 **GEISE, JUSTIN J., SCOTT B. FRANKLIN AND JACK W. GRUBAUGH.** University of Memphis—Arthropod community composition of native canebrakes- preliminary results.
- P32 **YODER, JAY A. AND JUSTIN L. TANK.** Wittenberg University—Long-term tick survival through resistance to infection conferred by an endosymbiotic fungus.
- P33 **RICHARDSON, TERRY<sup>1,2</sup>, MICHAEL MCCONNEL<sup>1,2</sup> AND JEFF SELBY<sup>2</sup>.** University of North Alabama<sup>1</sup> and AST Environmental Group<sup>2</sup>—Intrabasin range extensions for two federally endangered snails, *Tulotoma magnifica* and *Leptoxis plicata*.

### Ornithology

- P34 **MURDOCK, JESSICA H. AND MICHAEL J. YABSLEY.** University of Georgia, Warnell School of Forestry and Natural Resources, Southeastern Cooperative Wildlife Disease Study—*Salmonella* spp. and general bacterial growth on bird feeders in Clarke County, Georgia with implications for disease transmission.
- P35 **PANNKUK, EVAN L.** Appalachian State University—Comparative integumentary microscopic anatomy and tensile strength of a color polymorphic species: the eastern screech owl (*Megascops asio*).
- P36 **SIMS, CHRISTOPHER G. AND JENNIFER TOUCHSTONE.** The University of Arkansas at Monticello—Nest position and begging strategy determine nestling provisioning in Carolina chickadees (*Poecile carolinensis*).
- P37 **BARRIOS, NICOLE L. AND EDWARD D. MILLS.** Wingate University—Vocal adjustments of Pharaoh Quail (*Coturnix coturnix*, Xld1) as a result of anthropogenic noise pollution.

### Parasitology

- P38 **SMITH, ALAN F., LESLIE ALDRICH, LAURA BOWER, MANDY CARTER, KATHRYN CLEVELAND, KIMBERLY JOHNSON AND MARIA KULYA.** Mercer University—Detection of the causative agents and prevalence of *Borrelia burgdorferi*, *B. lonestari*, and *Ehrlichia* spp. from individual *Ixodes scapularis* collected from white-tailed deer of the Piedmont National Wildlife Refuge.
- P39 **GERHOLD, RICHARD W.<sup>1</sup>, M. KEVIN KEEL<sup>1</sup>, KIM ARNOLD<sup>2</sup> AND DOUG HOTTON<sup>3</sup>.** Southeastern Cooperative Wildlife Disease Study, College of Veterinary Medicine, The University of Georgia<sup>1</sup>, Maryland Department of Agriculture<sup>2</sup>, and Maryland Department of Natural Resources<sup>3</sup>—Verminous meningoencephalitis in a Sika deer (*Cervus nippon*). An apparent case of parelaphostrongylosis.

- P40 **THOMAS, JOSEPH<sup>1</sup>, RICCARDO FIORILLO<sup>2</sup>, AND LOREN HAYES<sup>2</sup>.** University of Louisiana at Monroe—Relationship between habitat disturbance and helminth parasites in the cotton rat, *Sigmodon hispidu*.
- P41 **JUTRAS, BRANDON L.** Eastern Illinois University—Lone Star Tick, *Borrelia lonestari*, the parasite and its tick host - Combining field surveys and molecular diagnostics in the study of STARI in Illinois.
- P42 **ROELLIG, DAWN M.<sup>1, 2</sup>, KATHERINE McMILLAN<sup>2</sup>, ANGELA E. ELLIS<sup>3</sup>, AND MICHAEL J. YABSLEY<sup>2, 4</sup>.** Department of Infectious Diseases, College of Veterinary Medicine, The University of Georgia<sup>1</sup>; Southeastern Cooperative Wildlife Disease Study, Department of Population Health, College of Veterinary Medicine, The University of Georgia<sup>2</sup>; Athens Veterinary Diagnostic Laboratory, College of Veterinary Medicine, The University of Georgia<sup>3</sup>; D.B. Warnell School of Forestry and Natural Resources, The University of Georgia—Experimental infection of two South American animal reservoirs with distinct strains of *Trypanosoma cruzi*.
- P43 **SCHOBER, JESSICA, KATE SHEEHAN AND JACK O'BRIEN.** University of South Alabama—Effect of the trematode, *Microphallus turgidus*, on growth of the common grass shrimp, *Palaemonetes pugio*, under laboratory conditions.

#### Developmental Biology

- P44 **MEULENERS, CANDICE AND VICTORIA TURGEON.** Furman University—PAR-1 activation by SFLLRNP decreases myelin deposition on lumbar motoneuron axons.
- P45 **SHERRILL, JONATHAN<sup>1</sup>, J. BEAIRD<sup>1</sup>, P.L. JERNIGAN<sup>2</sup>, M.B. TOWNSEND<sup>2</sup>, J.M. STURDIVANT<sup>2</sup>, M.M. BAILEY<sup>2</sup>, K.E. JACKSON<sup>2</sup>, J.F. RASCO<sup>2</sup>, R.P. SWATLOSKI<sup>3,4</sup>, R.D. ROGERS<sup>3,4</sup>, AND R.D. HOOD<sup>2,5</sup>.** <sup>1</sup>The University of West Alabama, <sup>2</sup>Department of Biological Sciences, <sup>3</sup>Department of Chemistry and <sup>4</sup>Center for Green Manufacturing, The University of Alabama, <sup>5</sup>Ronald D. Hood & Associates, Toxicology Consultants—Effects of 1-decyl-3-methylimidazolium chloride on fetal development of mice.
- P46 **FROST, EMILY S., ELISE M. BRANCH, C. MORGAN WILSON, AND REBECCA L. BEACH.** Hollins University—Teratogenic effects of the pesticide malathion on the development of zebrafish (*Danio rerio*).
- P47 **PARIHAR, MANISH, LOGAN CLOESSNER, AND CHRIS R. GISSENDANNER.** University of Louisiana at Monroe—Regulation of molting by an ecdysone receptor homolog in *Pristionchus pacificus*.

#### Microbiology

- P48 **KHAN, RABIA AND PREMILA N. ACHAR.** Kennesaw State University—Intraspecies variation in *Aspergillus parasiticus* in peanuts.

- P49 **GALDO, GUSTAVO M. AND PREMILA N. ACHAR.** Kennesaw State University—Biochemical changes in Georgia peanut infected by *Aspergillus flavus*.
- P50 **KHAN, SANA AND PREMILA N. ACHAR.** Kennesaw State University—Detection of fungal flora in peanut seeds by conventional methods and PCR.
- P51 **GALLANGO-BRUN, CAROLINA AND PREMILA N. ACHAR.** Kennesaw State University—Molecular characterization of *Aspergillus flavus* in commercial peanuts in Georgia.
- P52 **BARRON, SAMUAL<sup>1</sup>, BLAIR, BENJIE<sup>1</sup>, BEJ, ASIM<sup>2</sup> AND CHRIS MURDOCK<sup>1</sup>.** Jacksonville State University<sup>1</sup> and University of Alabama at Birmingham<sup>2</sup>—Investigation of effective DNA isolation methods from cave soils for bacteria diversity analysis.
- P53 **BLAIR, BENJIE, ASHLEY WARD, MARK MEADE AND MIJITABA HAMISSOU.** Jacksonville State University—Effects of photodynamic dyes on representative gram-positive and gram-negative bacteria.
- P54 **OLIVIER, HILLARY M, AAKAR A. THAKER, KRISTEN M. PETERSON AND NITYA P. JACOB.** Oxford College of Emory University—Diversity of microbial life in plant rhizosphere soils of Davidson-Arabia Mountain.
- P55 **MEYER, SHELLI L. AND RICHARD A. LONG.** University of South Carolina—Patchy distribution of *Vibrio vulnificus* in a Texas bay.

#### Genetics, Cellular and Molecular Biology

- P56 **SCULL, GREGORY AND ROBERT CARTER.** Jacksonville State University—A method for obtaining genetic samples from feral hogs.
- P57 **MURDOCK, CHRIS<sup>1</sup>, BARRON, SAMUAL<sup>1</sup>, PONDER, DAVID<sup>1</sup> AND THANE WIBBELS<sup>2</sup>.** Jacksonville State University<sup>1</sup> and University of Alabama at Birmingham<sup>2</sup>—Regulation of Dmrt1 gene expression via estrogen in a reptile with temperature-dependent sex determination.
- P58 **BLENDIA, ANNA<sup>1</sup>, ERIC FANG<sup>1</sup>, TODD VISION<sup>2</sup>, JOHN WILLIS<sup>3</sup> AND JEFFREY TOMKINS<sup>1</sup>.** Clemson University<sup>1</sup>, UNC at Chapel Hill<sup>2</sup> and Duke University<sup>3</sup>—Physical mapping of *Mimulus*, model plant species for ecological and evolutionary studies.
- P59 **KOVACH, KATHERINE E., SHEPARD M. ZEDAKER, MUHAMMAD JAVED IQBAL AND EM ULRICA EGERTSDOTTER.** Virginia Polytechnic Institute and State University—Assessing genetic variation of *Acer rubrum* and *Liriodendron tulipifera* populations in unmanaged forests of the Southeast United States.
- P60 **BOURGOIN, STEFAN<sup>1</sup> AND H. WAYNE SHEW<sup>2</sup>.** Florida State University<sup>1</sup> and Birmingham-Southern College<sup>2</sup>—A survey of acetylcholinesterase activity in bryophytes and the molecular form of the enzyme present in *Polytrichum commune*.

- P61 **O'HARA LONG, LINDSAY, STINA JENNIFER WEBB, JONATHAN ROBERTS, STEPHEN A. TAYLOR AND JUDY AWONG-TAYLOR.** Armstrong Atlantic State University—*Cfol* polymorphisms in a nicotinic receptor subunit gene (CHRNA4) and mental rotation task performance.
- P62 **ABERA, MAHLET<sup>1</sup>, JOHN J.G TESMER<sup>2</sup> AND MOHAMED AITTALEB<sup>2</sup>.** Guilford College<sup>1</sup> and University of Michigan<sup>2</sup>—Preliminary crystallization study for the interaction between the c-terminus of plexin B1 receptor and the PDZ domain of Leukemia Associated RhoGEF (LARG) to activate RhoA.
- P63 **EBIRINGA, CHIOMA<sup>1</sup>, LAURENCE WOODRUFF<sup>2</sup> AND KRISTEN JOHANSEN<sup>2</sup>.** Bowie State University<sup>1</sup> and Iowa State University<sup>2</sup>—Isolation and purification of GST-GFP protein for the screening of ANTI-GFP antibody.
- P64 **WIESE, CARRIE B. and MARGARET J. KOVACH.** University of Tennessee at Chattanooga—Evaluation of gene expression patterns associated with genomic instability in colon cancer.
- P65 **WISE, JONATHAN, STEPHANIE KAMOROFF, MEGAN SHINE AND ELI V. HESTERMANN.** Furman University—Estrogenic properties of aryl hydrocarbon receptor ligands in human breast cancer cells.
- P66 **PLAGENS, ROSEMARY AND ELI V. HESTERMANN.** Furman University—Regulation of the zinc-finger transcription factor Slug by the aryl hydrocarbon receptor in human breast cancer cells.
- P67 **SHALABI, RULA, KATHERINE MITCHUM AND ELI V. HESTERMANN.** Furman University—Agonistic and antagonistic responses of AHR ligands on gene expression in H1G1 mouse hepatoma and MCF-7 human breast cancer cells.

### Plant Biology

- P68 **IVEY, SHERRIE, EVANDREW WASHINGTON, SAMANTHA WOODS, DIONDRA WOODERT, JAMES WALKER, BAILEY GRETCHEN, NICOLE KRUEGER, ROY WANG, AND ABDELMAJID KASSEM.** Department of Natural Sciences, Fayetteville State University—Quantitative trait loci underlying seedling root traits in soybean [*Glycine max* (L.) (Merr.)] plants grown in the greenhouse and in the field.
- P69 **JACOBSON, JOSIE<sup>1</sup>, ALEN ALCIVAR<sup>1</sup>, JENNIFER RAINHO<sup>1</sup>, AND ABDELMAJID KASSEM<sup>2</sup>.** Department of Biological Sciences, Kean University<sup>1</sup> and Department of Natural Sciences, Fayetteville State University<sup>2</sup>—Genomic regions containing QTL for plant height, internodes length, and flower color in soybean [*Glycine max* (L.) (Merr.)].

- P70 **ALCIVAR, ALCIVAR<sup>1</sup>, JOSIE JACOBSON<sup>1</sup>, JENNIFER RAINHO<sup>1</sup>, KHALID MEKSEM<sup>2</sup>, DAVID A LIGHTFOOT<sup>2</sup>, AND ABDELMAJID KASSEM<sup>3</sup>.** Department of Biological Sciences, Kean University<sup>1</sup>; Department of Plant, Soil, and Agricultural Systems, Southern Illinois University<sup>2</sup>; and Department of Natural Sciences, Fayetteville State University<sup>3</sup>—Genetic analysis of plant height, hypocotyl and internodes length in soybean [*Glycine max* (L.) (Merr.)].
- P71 **WOODERT, DIONDRA, IVEY SHERRIE, EVANDREW WASHINGTON, SAMANTHA WOODS, DIONDRA WOODERT, JAMES WALKER, BAILEY GRETCHEN, NICOLE KRUEGER, ROY WANG, AND ABDELMAJID KASSEM.** Department of Natural Sciences, Fayetteville State University—Is there a correlation between plant height and yield in soybean?
- P72 **HARTZ, CHRISTINA AND ABDELMAJID KASSEM.** Department of Natural Sciences, Fayetteville State University—Influence of iron, potassium, magnesium, and nitrogen deficiencies on the growth and development of sorghum and sunflower seedlings.
- P73 **REDOBLADO, TRACY<sup>1</sup>, THOMAS MCELROY<sup>1</sup>, PAULA JACKSON<sup>1</sup>, JOSE LUIS ANDRADE<sup>2</sup> AND CASANDRA REYES-GARCIA<sup>2</sup>.** Kennesaw State University<sup>1</sup>, Centro de Investigación Científica de Yucatán<sup>2</sup>—Characterization of growth and dispersal patterns for a clonal tree *Gymnopodium floribundum* (Polygonaceae) in the Yucatan Peninsula, Mexico.
- P74 **SMITH, BLAKE AND DALE VOGELIEN.** Kennesaw State University—The use of AFLP to identify daylily cultivars.
- P75 **MONTGOMERY, MEREDITH and JOEY SHAW.** University of Tennessee at Chattanooga—Toward an understanding of *Clematis fremontii* S. Watson (Ranunculaceae) in the southeastern United States.
- P76 **JOHNSON ELIZABETH, BENJAMINE A. VAUGHN, HOWARD S. NEUFELD, AND LIBBY G. PUCKETT.** Appalachian State University—Better red then dead!: the role of anthocyanins in stems.
- P77 **VAUGHAN, BENJAMIN A., ELIZABETH G. JOHNSON, LIBBY G. PUCKETT AND HOWARD S. NEUFELD.** Appalachian State—An investigation of the odor associated with *Galax urceolata*.

### Plant Ecology I

- P78 **ABIT, PAMELA P. AND WILLIAM A. HOFFMANN.** North Carolina State University—Ecological and physiological basis for the distribution of woody plants along water availability gradients in the eastern US mixed forest.
- P79 **LISK<sup>1</sup> RYAN, JOSH HUNT<sup>1</sup>, THOMAS MCELROY<sup>1</sup>, CASANDRA REYES-GARCIA<sup>2</sup>, JOSE LUIS ANDRADE<sup>2</sup>, AND PAULA C. JACKSON<sup>1</sup>.** Kennesaw State University<sup>1</sup>, Centro De Investigación Científica De Yucatán<sup>2</sup>—Comparison of physiological responses of tree species in a tropical dry deciduous forest. Dzibilchaltun, Yucatan Peninsula, Mexico.

- P80      **STOWE, KIRK A.<sup>1</sup> and CRIS G. HOCHWENDER<sup>2</sup>.** University of South Carolina-Columbia, SC<sup>1</sup> and University of Evansville, IN<sup>2</sup>—Environmentally dependent expression of the cost of glucosinolate production in *Brassica rapa*.
- P81      **HUGHES, NICOLE<sup>1</sup>, KENT BURKEY<sup>2</sup>, KEITH REINHARDT<sup>1</sup>, AND WILLIAM SMITH<sup>1</sup>.** Wake Forest University<sup>1</sup>, and North Carolina State University<sup>2</sup>—Red and green coloration in winter leaves: why do some evergreen species synthesize anthocyanins while others don't?
- P82      **WENK, EVELYN S.<sup>1</sup>, G. GEOFF WANG<sup>1</sup>, AND JOAN L. WALKER<sup>2</sup>.** Clemson University<sup>1</sup> and U.S. Forest Service<sup>2</sup>—Chemical properties of fuels in a longleaf pine ecosystem with altered understory vegetation.
- P83      **KOONTZ, JOSHUA M. AND SCOTT B. FRANKLIN.** University of Memphis—Effects of fire on riparian plant communities at Land Between the Lakes.
- P84      **BYTHE, TYLER, TROY EVANS, CHRISTINE LATTIN, NEIL PEDERSON AND KACIE TACKETT.** Eastern Kentucky University—Effects of climate and geography on the radial growth of seven eastern tree species.
- P85      **PERKINS, FERN S. AND HOWARD S. NEUFELD.** Appalachian State University—Impacts of elevated nitrogen deposition on the morphology and physiology of the lichen *Umbilicaria mammulata*.
- P86      **PERKINS, FERN S. AND HOWARD S. NEUFELD.** Appalachian State University—Impacts of elevated O<sub>3</sub> and CO<sub>2</sub> on corticolous lichen communities in the AspenFACE free-air exposure system in Rhineland, WI.
- P87      **CRABTREE, CHRISTOPHER D., JOSEPH S. ELY, and HAROLD W. KELLER.** University of Central Missouri—Important soil attributes associated with macrofungi and vascular plants among terrestrial natural communities at Ha Ha Tonka State Park, Missouri.
- P88      **TACKETT, KACIE<sup>1</sup>, NEIL PEDERSON<sup>2</sup> AND STACY CLARK<sup>3</sup>.** Eastern Kentucky University<sup>1,2</sup> and USDA Forest Service<sup>3</sup>—Age structure of two hemlock-dominated ravines and adjacent upland oak-hardwood forests within the Cumberland Plateau Region.
- P89      **STEHN, SARAH<sup>1</sup>, CHRISTOPHER WEBSTER<sup>1</sup>, AND MICHAEL JENKINS<sup>2</sup>.** Michigan Technological University<sup>1</sup> and Great Smoky Mountains National Park<sup>2</sup>—Ground-layer vegetation dynamics in southern Appalachian spruce-fir forests.

## POSTER SESSION II – FRIDAY, APRIL 18

## Animal Ecology II

- P90      **BUCKLEY, MORIAH, ALISA BENTLEY, REGGIE COLEMAN AND ROGER SAUTERER.** Jacksonville State University, Jacksonville, AL—Potential toxicity of water from Snow Creek, Anniston, AL on developing frog embryos using developmental toxicity assays and development of protein analysis by 2-D gel electrophoresis.
- P91      **COLLIER, ALEX, CRYSTINA BRONK, BRETT LARSON AND STEVE TAYLOR.** Armstrong Atlantic State University—Predation stress impacts tadpole behavior, growth and overall size at metamorphosis.
- P92      **BRONK, CRYSTINA, ALEX COLLIER, BRETT LARSON AND STEVE TAYLOR.** Armstrong Atlantic State University—The impact of predation stress by largemouth bass (*Micropterus salmoides*) on the growth of leopard frog tadpoles (*Rana sphenoccephala*).
- P93      **MITCHELL, DAVID AND WILLIAM ENSIGN.** Department of Biology and Physics, Kennesaw State University, Kennesaw, GA—Fish species richness in adventitious streams of the Etowah River Basin.
- P94      **PAGE, CAROLINE, WILLIAM ENSIGN AND THOMAS MCELROY.** Kennesaw State University—Haplotype variation in *Campostoma oligolepis* in the Etowah River System.
- P95      **PENGSAK, JARASPUN, WILLIAM ENSIGN AND THOMAS MCELROY.** Kennesaw State University—Delineation of genetic variation for *Campostoma oligolepis* in the Etowah River System.
- P96      **VAN DEVENDER, ROBERT WAYNE AND AMY S. VAN DEVENDER.** Department of Biology, Appalachian State University, Boone, NC and 797 Little Laurel Rd. Ext, Boone, NC—Land snail diversity along three Carolina railroads.

## Herpetology II

- P97      **SAUNDERS, K., C. BARTKUS, A. SPRIGGS AND T.K. PAULEY.** Marshall University—Tail fat storage and egg deposition of female *Desmognathus monticola* and *Desmognathus ochrophaeus*.
- P98      **DOWNER, H. REID, JUSTIN A. WEISS, TOMI BERGSTROM AND THOMAS K. PAULEY.** Marshall University—Comparison of tail fat content and ovarian follicle size of gravid and non-gravid female *Plethodon cinereus* and *Plethodon hoffmani*.
- P99      **BLANCHARD, TOM, HEATHER BROWN AND SETH WILLIAMSON.** University of Tennessee at Martin—Hatching chronology and larval growth rates of three species of ambystomatid salamanders in northwest Tennessee.



- P100 **GASKIN, PATRICK.** Eastern Kentucky University—Thermal tolerance of tadpoles of three temperate-zone anurans.
- P101 **WEISS, JUSTIN<sup>1</sup> AND PAUL CUPP<sup>2</sup>.** Marshall University<sup>1</sup> and Eastern Kentucky University<sup>2</sup>—Odor studies in the southern two-lined salamander, *Eurycea cirrigera*.
- P102 **GRIBBINS, KEVIN AND JUSTIN RHEUBERT.** Department of Biology, Wittenberg University—The ultrastructural evaluation of spermiogenesis within the testis of the western cottonmouth, *Agkistrodon piscivorus*.
- P103 **ROBERTSON, LACEY D. AND BETSIE B. ROTHERMEL.** Austin Peay State University—Preliminary results of treefrog occupancy surveys in western Kentucky and adjacent Tennessee.
- P104 **DIEFENBACHER, ERIC H. AND THOMAS K. PAULEY.** Marshall University—An update on the status and life history of the Eastern Wormsnake (*Carphophis a. amoenus*) in West Virginia.
- P105 **DIEFENBACHER, ERIC H. AND THOMAS K. PAULEY.** Marshall University—Iris Pattern Identification (IPID): A technique for identifying amphibians and reptiles during field studies.

#### Animal Behavior

- P106 **HAYES, LOREN<sup>1</sup>, ADRIAN CHESH<sup>1</sup>, JOSEPH BURGER<sup>1</sup>, RODRIGO CASTRO<sup>2</sup>, LILIANA ORTIZ TOLHUYSEN<sup>2</sup>, AND LUIS EBENSPERGER<sup>2</sup>.** University of Louisiana at Monroe<sup>1</sup> and P. Universidad Católica de Chile<sup>2</sup>—Fitness consequences of sociality in the South American rodent, *Octodon degu*.
- P107 **ISELL, KATIE, ROBYNN MACKECHNIE, DAVID GARRETT, AND G. R. DAVIS.** Wofford College—Does daily limited access to a highly palatable sweet food induce binge eating in laboratory rats?
- P108 **MACKECHNIE, ROBYNN, KISHAN GOVIND AND G.R. DAVIS.** Wofford College—Does scheduled access to a highly palatable carbohydrate-rich food trigger binge eating in laboratory rats?
- P109 **GOVIND, KISHAN, ROBYNN MACKECHNIE AND G.R. DAVIS.** Wofford College—Limited intermittent access to a highly palatable food combined with chronic mild stress induces overeating in laboratory rats.
- P110 **MCDONALD, ASHLEY M. AND TERRY D. RICHARDSON.** University of North Alabama—Prey profitability of Caribbean spiny lobster, *Panulirus argus*, when foraging on dwarf cerithid snail, *Cerithium lutosum*.
- P111 **SWEDA, MICHAEL T. AND TERRY D. RICHARDSON.** University of North Alabama—Prey size selection in Caribbean spiny lobster, *Panulirus argus*, when foraging on dwarf cerithid snail, *Cerithium lutosum*.

- P112 **ISELL, ASHLEY D. AND TERRY D. RICHARDSON.** University of North Alabama—Risk of mandibular damage in Caribbean spiny lobster, *Panulirus argus*, when foraging on dwarf ceriths, *Cerithium lutosum*.

### Plant Ecology II

- P113 **SCOTT, GERALD R., AND BRIAN C. MCCARTHY.** Ohio University—Vegetation composition differences between *Ailanthus altissima* (P. Mill.(Swingle) -infested and adjacent, non-infested forest sites in Southern Ohio.
- P114 **LATTY, ERIKA AND PAMELA CRUZ.** Hollins University—Earthworm effects on tree seedling biomass and survival in a mesocosm experiment.
- P115 **CHANDLER, HEATHER, JOEL M. GRAMLING, DANNY J. GUSTAFSON AND LEIGH THACKSTON.** The Citadel—The impact of laurel wilt disease on coastal forests in South Carolina.
- P116 **CIPOLLINI, MARTIN, JENNIFER BLALOCK, PETER BROWING, GLENN CASSELL, EVAN LANE, NICOLE MALLOY AND ERIC SWANSON.** Berry College—Short-term effects of restoration burning and herbicide treatment on aboveground biomass and tree community structure in a relict Mountain Longleaf Pine ecosystem.
- P117 **CIPOLLINI, MARTIN, CONNIE FRANCIA, CAROLYN KUJALA, ANGELA LOTTES, NICOLE MALLOY, MARGARET MANN, ERIC SWANSON AND NATHANIAL WIGINGTON.** Berry College—Effects of restoration prescribed burning on post-fire mortality in relict Montane Longleaf Pine (*Pinus palustris*) in northwestern Georgia.
- P118 **ELY, JOSEPH S.** University of Central Missouri—Long-term effects of restoration on savanna vegetation at Knob Noster State Park, Johnson County, Missouri.
- P119 **ELY, JOSEPH S.** University of Central Missouri—Savanna soil attributes associated with woody and herbaceous plant species at Knob Noster State Park, Johnson County, Missouri.
- P120 **KEITH E GILLAND<sup>1</sup>, DR. CAROLYN H KEIFFER<sup>2</sup> and DR. BRIAN C. MCCARTHY<sup>1</sup>.** Ohio University<sup>1</sup> and Miami University<sup>2</sup>—Seed production of forest-grown American chestnut *Castanea dentate*.
- P121 **JONES-HELD, SUSAN<sup>1</sup>, MICHAEL E. HELD<sup>2</sup> AND JOE E. WINSTEAD<sup>3</sup>.** Rutgers University<sup>1</sup>, Saint Peter's College<sup>2</sup> and Southern Arkansas University<sup>3</sup>—Preliminary analysis of the soil algal community of an oil and metal contaminated site in southwestern Arkansas.
- P122 **BHATTARAI, GANESH P. AND JOHN D. HORNER.** Department of Biology Texas Christian University—Deciphering the importance of pitcher size in prey capture in the carnivorous plant, *Sarracenia alata* Wood.

P123 **STEWART, SUNNI D., JOHN J. HUTCHENS, JR. AND JAMES O. LUKEN.** Coastal Carolina University—Functional response of the Venus flytrap (*Dionaea muscipula*).

P124 **MITCHELL, CHAD H., MICHAEL W. DENSLOW AND ZACK E. MURRELL.** Appalachian State University—Floristic education in North Carolina 1930-2007: where do we go from here?

#### Plant Systematics

P125 **MURRELL, ZACK E. AND DERICK POINDEXTER.** Appalachian State University—A report on the progress and goals of SERNEC: SouthEast Regional Network of Expertise and Collections.

P126 **MORRIS, MICHAEL WAYNE<sup>1</sup>, JOHN WILLIAMS<sup>2</sup>, MAGGIE PSCHANDL<sup>2</sup>, AND RENEE' VAN CLEAVE<sup>2</sup>.** Troy University<sup>1</sup> and North Georgia College & State University<sup>2</sup>—A floristic study of Burks Mountain ultramafic woodland, Columbia County, Georgia.

P127 **ZOMLEFER, WENDY B. AND DAVID E. GIANNASI.** Department of Plant Biology, University of Georgia—Vascular plant survey of Cumberland Island National Seashore, Camden County, Georgia.

P128 **BRUEHL, ADAM<sup>1</sup> AND PETER FRITSCH<sup>2</sup>.** Guilford College<sup>1</sup> and The California Academy of Sciences<sup>2</sup>—Comparative pollen morphology of the genus *Symplocos*.

P129 **KEY, JANN AND MICHAEL WOODS.** Troy University—The genus *Rhynchosia* (Fabaceae) in Alabama.

#### Teaching Biology

P130 **SONGER, STEPHANIE AND IRENE KOKKALA.** North Georgia College & State University—Biology in Second Life.

P131 **MOELLER, JOHN AND G.R. DAVIS.** Wofford College—Does consulting with the professor result in greater improvement on the grade of a revised written assignment?

P132 **DELFINO, JOHN AND BEVERLY W. JUETT.** Midway College—Collaborative research at Midway College: a blend of faculty pursuits and development of undergraduate scientists.

## COMMERCIAL WORKSHOPS

Commercial workshops will be available for all registered attendees. These workshops presented by exhibitors will allow you to learn about the latest tips from the experts. The fee for commercial workshops is \$10 each, and you may register to attend one or more workshops. Space is limited, so please pre-register on the meeting registration form to reserve your spot.

### **Enhance Your Research Skills with Digital Cameras, Digital Microscopes and Imaging Software**

**Thursday, 8:30pm-10:00am, Wisteria Room**

**Presenter: David Doty** former AP Biology teacher at Oswego High School, and Educational Specialist for Ken-A-Vision.

**Sponsor: Associated Microscopes**

Demonstrating the latest low-cost equipment in digital microscopes and digital cameras. See how easy it is to capture images, capture movies, time capturing, email images and do internet streaming. The software allows for full-screen viewing of live images on both Mac and Windows pc's. Creating a digital portfolio or digital lab report was never easier.

**Amalgamation** – Layer and blend a saved image over the current image.

**Image editing toolbar** – Open a fully-featured image editing toolbar that allows you to edit, highlight, rotate, and brighten your captured image.

**Measuring tools** – Create calibrated measurement standards that will allow you to take precise measurements on the images that you capture.

**Magnifier** – Magnify parts of the image for better viewing.

Workshop includes a brief demonstration of image techniques using NIH image j software. An activity manual on display can teach you the skills you need to use image j effectively.

### **AUTOPSY: Forensic Dissection with Carolina's Perfect Solution® Pigs**

**Thursday, 8:30am-10:00am, Peach Room**

**Presenter: Marilyn Pendley** - Award winning biology teacher

**Sponsor: Carolina Biological Supply Company**

Engage students and revitalize your instruction of mammalian structure and function with a "real" classroom autopsy! Participants dissect a pig using human autopsy protocols.

### **Teaching Introductory Biology: New Challenges and Solutions.**

**Thursday, 10:30am-12:00 noon, Wisteria Room**

**Presenter: Dr Paul Hertz**

**Sponsor: Brooks/Cole-Cengage Publishing**

As the field of Biology experiences an explosive growth of information and new directions in research, Biology faculty face the dual challenges of keeping up with novel developments and helping their students remain engaged in learning the essentials of a rapidly changing field. Professor Paul E. Hertz, a long-time instructor of introductory biology and the coauthor of a newly published introductory text, will lead a discussion of some of these challenges and the ways in which instructors overcome them. Discussion topics will include how to incorporate new discoveries and new research approaches without abandoning a thorough treatment of more classical knowledge, how to encourage students to think critically about the material they learn, how to facilitate active and collaborative learning in a large class, and how to help students who find themselves falling behind as the semester progresses. Rather than providing definitive solutions to these challenges, Professor Hertz will encourage members of the audience to share their experiences and describe techniques with which they have had some success.

**Hands-On Genetics Is Easier with Wisconsin Fast Plants™ and Drosophila****Thursday, 10:30am-12:00 noon, Peach Room****Presenter: Dr Bob Matthews****Sponsor: Carolina Biological Supply Company**

Wisconsin Fast Plants™ and Drosophila enhance teaching genetics. Learn about growing and crossing these organisms, including how to evaluate F2 offspring and collect and analyze data.

**Is there Molecular Evidence for Evolution? Protein Profiler Kit****Thursday, 1:30pm-3:00pm, Wisteria Room****Sponsor: Bio-Rad**

Proteomics is the study of the structure, function, and interaction of proteins with each other and with their environment. In this hands-on workshop you will learn to use protein electrophoresis to generate protein profiles from the muscle of distant and closely related species of fish. Test the hypothesis that protein profiles are indicators of evolutionary relatedness and apply your findings to the problem of solving evolutionary relationships by constructing cladograms from your own gel electrophoresis results. Learn about proteomics and explore evolution within the context of the complete central mantra of biology: DNA> RNA>Protein>Trait.

**Comparative Mammalian Organ Dissection with Carolina's Perfect Solution® Specimens****Thursday, 1:30pm-3:00pm, Peach Room****Presenter: Dr Bob Matthews****Sponsor: Carolina Biological Supply Company**

Participants dissect a mammal brain, eye, heart, and kidney. They learn to identify representative structures, distinguish the tissue types, and compare blood flow and innervation within each specimen. They also explore the physiological links between organ systems.

**Bio-Rad GMO Investigator™ Kit****Thursday, 3:30pm-5:00pm, Wisteria Room****Sponsor: Bio-Rad**

Have your favorite foods been genetically modified? Currently genetically modified foods are not required to be labeled as such. This hands-on workshop teaches the basics of DNA extraction, PCR, and gel electrophoresis and how these techniques are used to test common grocery store food products for the presence of GMO foods. Are GM crops a good thing? Regardless of where you stand in the GM debate, wouldn't it be interesting to know which corn and soy-based foods you eat are GMO foods? Learn key background and how to prep the lab. Do exactly what your students will do.

**Illuminate Your Classroom with Carolina's Green Gene Colony Transformation****Thursday, 3:30pm - 5:00pm, Peach Room****Presenter: Marilyn Pendley - Award winning biology teacher.****Sponsor: Carolina Biological Supply Company**

Students become "gene jockeys" with this genetic engineering and molecular heredity kit. DNA from one organism (*Aequorea victoria*) is placed into a different organism (*E. coli*). When combined with the jellyfish GFP gene, *E. coli* appears green under white light and fluorescent under UV light. Kit meets National Science Standards.

**A Time Saver for Community College and College Labs****Friday, 8:30am-10:00am, Wisteria Room****Sponsor: Bio-Rad**

Want easy, foolproof labs for undergraduate courses? Do you do phenotypic selection of bacteria, transformation, protein purification, SDS-PAGE, restriction digestion, PCR,

cloning, or sequencing? We have the kits for you! Come and see a brief introduction and demo of each.

**Inquiry-based Rat Dissection with Carolina's Perfect Solution<sup>®</sup> Specimens**

**Friday, 8:30am-10:00am, Peach Room**

**Presenter: Marilyn Pendley - Award winning biology teacher.**

**Sponsor: Carolina Biological Supply Company**

Experience superior quality with a *Carolina's Perfect Solution<sup>®</sup>* specimen, which offers a safe alternative to formaldehyde. This revolutionary fixative is nontoxic, has no formaldehyde odor, and requires no special ventilation or disposal. Available exclusively from Carolina, these preserved rat specimens are the most lifelike and safest available. *œ*



Will Mabry, Wofford '09, created the giant sculpture in the fountain leading into Wofford College in honor of the Class of 2007. The sculpture represents Wofford; the water represents students entering Wofford in one large stream then being dispersed out into the world.

**Author Index for Papers and Posters with Abstract Numbers**

**Authors Sorted by Last Name**

(numbers = abstract number; P = poster)

**A**

Aabit, Pamela ..... 91  
 Aakar, A. .... P54  
 Abbot, Patrick ..... 172  
 Abbott, Albert G. .... 135  
 Abera, Mahlet ..... P62  
 Abit, Pamela P ..... P78  
 Achar, Premila N. .... P48, P49,  
 ..... P50, P51  
 Adams, Christopher A. .... 148  
 Aghoram, Karthik ..... 159  
 Aittaleb, Mohamed ..... P62  
 Akre, Thomas B. .... 208  
 Alcivar, Alcivar ..... P70  
 Alcivar, Alen ..... P69  
 Alderete, John F. .... 117  
 Aldrich, Leslie ..... P38  
 Allison, Andrew B. .... 117  
 Allison, James R. .... 21  
 Anderson, C. Brannon ..... 131  
 Andrade, Jose Luis ..... P73, P79  
 Arnold, Kim ..... P39  
 Artois, Tom ..... 80  
 Atairu, Popoh A. .... 180, 181  
 Atkinson, Robert ..... 68, 69, P22  
 ..... P24, P25, P26  
 Awong-Taylor, Judy ..... 30, P61

**B**

Bailey, M.M. .... P45  
 Baker, Steve ..... 179  
 Baker, Tiffany G. .... 161  
 Balbach, Hal ..... 73  
 Baldwin, Brian S. .... 13  
 Baldwin, Timothy, E. .... 213  
 Ballenger, Jared J. .... 215  
 Barfield, Whitney L. .... 123  
 Barger, T. Wayne ..... 204  
 Barrios, Nicole L. .... P37  
 Barron, Samuel ..... P52, P57  
 Bartkus, C. .... P97  
 Batson, Sandi M. .... 80  
 Beach, Rebecca L. .... P46  
 Beaird, J. .... P45  
 Beamer, David A. .... 111, P15  
 Beck, James B. .... 167  
 Bej, Asim ..... P52  
 Bentley, Alis ..... P90  
 Bergstrom Tomi ..... P98  
 Berti, William ..... 62  
 Bhattarai, Ganesh P. .... P122  
 Billington, Neil ..... 65, 66  
 Binkley, Meagan ..... 17  
 Bissell, H. .... 12  
 Blagburn, Byron L. .... 43  
 Blair, Benjie G. .... 31, 154, 212,  
 ..... P52, P53  
 Blalock, Jennifer ..... P116  
 Blanchard, Tom ..... P99  
 Blattel, Christopher R. .... 10  
 Blenda, Anna V. .... 135, P58  
 Blue, Jarrod ..... 52, 53  
 Bogard, Amy ..... 32  
 Bolin, Jay F. .... 19, 201  
 Bourgon, Stefan ..... P60

Bower, Laura ..... P38  
 Bowling, Megan ..... 44  
 Branch, Elise M. .... P46  
 Brannon, Jeffery M. .... 202  
 Brannon, M. Patrick ..... 54  
 Brannon, Ricky D. .... 18  
 Brantley, Christopher, G. .... 4, 5  
 Bray, Rebecca D. .... 19  
 Brecha, Staci B. .... 149  
 Brendecke, William ..... 99  
 Breshears, Robert ..... 96  
 Brewer, Elizabeth J. .... 52  
 Bronk, Crystina ..... P91, P92  
 Browing, Peter ..... P116  
 Brown, Christopher G. .... 177  
 Brown, Emily ..... 38  
 Brown, Heather ..... P99  
 Brown, Joshua ..... 108  
 Bruce, Kaki ..... 98  
 Bruehl, Adam ..... P128  
 Bryan, Timothy ..... 160  
 Bryant, Matthew ..... P29  
 Buckley, Moriah ..... P90  
 Buhlmann, Kurt A. .... 208  
 Buker, Carol M. .... P16  
 Bullard, Whitney ..... 37  
 Burdette, Megan ..... 155  
 Burger, Joseph Robert .. 49, P106  
 Burke, Kent ..... P81  
 Burkhart, John ..... 53  
 Buron, Isaure de ..... 160, 161  
 Burt, Melissa A. .... 54  
 Bush, Catherine M. .... 166  
 Bush, Daniel ..... 52  
 Butnor, John R. .... 192  
 Bythe, Tyler, Evans, Troy ..... P84

**C**

Cabral, Guy ..... 1  
 Campo, Jessica M. .... P22  
 Cariveau, Mickael ..... 143  
 Carleton, Renee E. .... 119  
 Carr, John L. .... 108  
 Carr, Robert A. .... P2  
 Carter, Eloise ..... 179  
 Carter, Mandy ..... P38  
 Carter, Robert E. .... 103 209, P56  
 Carver, Brian D. .... 180, 181  
 Cassell, Glenn ..... P116  
 Castillo, Christopher ..... 52  
 Castro, Rodrigo A. .... 49, P106  
 Caudill, Erin ..... 98  
 Cebrian, Just ..... 48  
 Cely, William E. .... 203  
 Chamberlin-Graham, C. .... 73  
 Chandler, Heather ..... P115  
 Chapman, Alycia ..... 41, 42, 120  
 Chapman, Misty A. .... 154  
 Chen, Nanhua ..... 121  
 Cheng, Qin ..... 121  
 Chesh, Adrian S. .... 49, P106  
 Chmura, Gail ..... P28  
 Christensen, Norman ..... 219  
 Cianchetti, John ..... 62  
 Cipollini, Martin ..... P116, P117  
 Cirtain, Margaret ..... 13

Clark, Stacy ..... P88  
 Claxton, Andrew ..... 162  
 Cleveland, Kathryn ..... P38  
 Cline, George ..... 209  
 Cloessner, Logan ..... P47  
 Cocking, Dean ..... 62  
 Coffman, Caroline ..... 37  
 Coleman, Reggie ..... P90  
 Collier, Alex ..... P91, P92  
 Conley, Justin ..... 32  
 Connette, Grant M. .... P14  
 Connors, Vincent A. .... 160  
 Corfmann, Sara ..... 98  
 Cortez-Vecino, J. A. .... 164  
 Covich, Alan P. .... 216  
 Crabtree, Christopher ..... 85, P87  
 Craddock, J. Hill ..... 17  
 Crawford, Graham ..... 120  
 Creech, Ronald E. .... 66  
 Cromer, R. Brandon ..... 55  
 Crow, Yanick ..... 154  
 Crowley, Philip H. .... 83, 90  
 Cruz, Angel ..... 56  
 Cruz, Pamela ..... P114  
 Cupp, Paul V. Jr. .... P11, P101

**D**

Dafoe, Robert ..... 75  
 Daley, Dane ..... 200  
 Dane, Fenny ..... 17  
 Davis, Cheryl D. .... 36, 44  
 Davis, G. R. .... P107, P108, P109  
 Davison, Paul G. .... 79  
 Day, Frank P. .... 149, 150, 192  
 De Steven, Diane ..... 67  
 Dennis, Matt ..... 118  
 Denslow, Michael W. .... 92, P124  
 Derrick, Blake ..... 98  
 Deviney, David E. .... 198  
 Devore, Melanie ..... 100  
 DeWald Laura .. 84, 105, 174, 176  
 Diefenbacher, Eric H. .. 110, P104,  
 ..... P105  
 Dillon, A. Ray ..... 43  
 Diluzio, Nicholas A. .... 175  
 Dixon, Andrea L. .... 171  
 Dorcas, Michael E. .... 51, 57, 58,  
 ..... 130, P8, P12, P13, P14  
 Dornis, Miranda L. .... 18  
 Downer, H. Reid ..... P98  
 Drake, Bert G. .... 192  
 Dubey, J.P. .... 164  
 Duda, Jeffery ..... 73  
 Dykstra, Christine C. .... 43

**E**

Ebensperger, Luis A. .... 49, P106  
 Ebringa, Chioma ..... P63  
 Edenfield, Katie ..... 37, 39  
 Edmonson, Chris ..... 200  
 Egerton, Todd A. .... 70  
 Egertsdotter, Em Ulrika ..... P59  
 Ellis, Angela E. .... 40, P42  
 Ellis, Jennifer ..... 104  
 Ely, Joseph S. .... 85, 96, 97, P87,  
 ..... P118, P119

Emlen, John ..... 73  
 Ensign, William ... 127, P93, P94,  
 ..... P95  
 Ertuck, Hatice Neval ..... 155, 156  
 Eskew, Evan A. .... P9  
 Estes, Dwayne ..... 200  
 Evans, Elizabeth ..... 138  
 Evans, Troy ..... P84  
 Everhardt, Sidney E. .... 96, 97  
 Extine, Jennifer L. .... 174

**F**

Falcone, Josephine F. .... 176  
 Fang, Eric ..... P58  
 Fanning, Amanda ..... 42  
 Farrell, T. M. .... 133  
 Faulknew, Charles T. .... 41, 120  
 Ferdous, Mir ..... 194  
 Fernandes, Pearl R. .... 187, P27  
 Finnley, T. .... 12  
 Fiorillo, Riccardo ... 148, P19, P40  
 Flagg, Raymond O. .... 24  
 Flick, George ..... 46  
 Forrest, T.G. .... 178  
 Fralish, James ..... 191, 194  
 France, Scott ..... 160  
 Francia, Carolyn ..... P117  
 Franklin, Scott B. .... 13, 147, P31,  
 ..... P83  
 Freeman, Carl ..... 73  
 Friedman, Katherine ..... 137  
 Friedman, Robert ..... 28  
 Fritsch, Peter ..... P128  
 Frost, Emily S. .... P46  
 Fuller, Claire ..... 118, 122  
 Funk, Daniel J. .... 177  
 Furches, Steven M. .... 20

**G**

Gabriel, Mourad ..... 38  
 Gagnon, Paul R. .... 9  
 Gahagen, Benjamin A. .... 206  
 Galdo, Gustavo M. .... P49  
 Gallango-Brun, Carolina .... P51  
 Garcia-Ramos, Gisela ..... 83  
 Garrett, David ..... P107  
 Garrison, Laurel ..... 3  
 Gaskin, Patrick ..... P100  
 Gaston, Janet ..... 66  
 Gattton, Michelle ..... 121  
 Gecheva, Geri ..... 41  
 Geise, Justin J. .... P31  
 Gennari, Solange M. .... 164  
 Gerhold, Richard W. .... 117, P39  
 Giannasi, David E. .... P127  
 Gibbons, J. Whitfield ..... 208  
 Gilland, Keith E. .... P120  
 Gillespie, Emily L. .... 168  
 Gissendanner, Chris R. .... P47  
 Giunta, Anthony Jr. .... 195  
 Givens, M. Daniel ..... 43  
 Glenn, Travis C. .... 107  
 Godard, Renee D. .... P1  
 Goldberg, Justin ..... 52  
 Gompper, Matthew ..... 38  
 Goodwillie, C. .... 82  
 Govind, Kishan ..... P108, P109  
 Gowan, Charles ..... 129  
 Grace, Michael S. .... 109  
 Graf, Marie-Theres ..... P28  
 Graham, John ..... 73  
 Gramling, Joel M. .... P115

Grant, Stephanie ..... 105  
 Greenberg, Cathryn H. .... 178  
 Greenleaf, Arno ..... 140  
 Gretchen, Bailey ..... P68, P71  
 Gribbins, Kevin ..... P102  
 Griffith, Adam ..... 6  
 Groce, Chad ..... 36, 44  
 Groen, Kristen E. .... 90  
 Grubaugh, Jack W. .... P31  
 Gustafson, Dannt J. .... 195, P115

**H**

Haberle, Rosmarie ..... 16  
 Hall, C. A. .... 37, 39  
 Hamilton, Amy ..... 114  
 Hamissou, Mijitaba 102, 103, P53  
 Hamrick, James L. .... 136  
 Hancock, Thomas E. .... 151  
 Haney, Dennis C. .... 56, 64, 131  
 Harkey, Jason ..... 198  
 Harkey, John ..... 198  
 Harshaw, Lauren ..... 53  
 Hartz, Christina ..... P72  
 Harvey, Scott, ..... 154  
 Hawkins, Katherine ..... 52  
 Hawley, Joanna E. .... 64  
 Hayes, Loren D. ... 49, P40, P106  
 Haywood, Josh ..... 52  
 Hazelton, Erin R. .... P7  
 Heafnew, Kerry D. .... 18  
 Heatwole, Harold F. .... 74  
 Held, Michael E. .... P121  
 Hendershott, Christine E. .... 142  
 Henderson, Daniel S. .... 189  
 Herald, Douglas ..... 197  
 Herr, J. M., Jr. .... 185  
 Herron, Brooke ..... 161  
 Hester, Joy M. .... P13  
 Hestermann, Eli .... P65, P66, P67  
 Hilsinger, K. Claire ..... 116  
 Hinkle, Ross ..... 93  
 Hisey, John R. .... 180, 181  
 Hobbs III, Horton H. .... P7  
 Hochwender, Cris G. .... P80  
 Hoffmann, William A. .... 91, P78  
 Holladay, Chase G. .... P19  
 Hollis, Tom ..... 154  
 Holt, Brian ..... 204  
 Hood, R.D. .... P45  
 Horn, Charles N. .... 170  
 Horner, John D. .... P122  
 Horton, D. Scott ..... 13  
 Horton, Lauren M. .... 215  
 Hotton, Doug ..... P39  
 Hou, Guichuan ..... 101  
 Howlett, Inigo ..... 35  
 Hudson III, Herman W. .. P25, P26  
 Hudson, III, Henry W. .... 68, 69  
 Hughes, Nicole M. .... 88, P81  
 Hunt, Josh ..... P79  
 Hurley, Stephanie L. .... P25  
 Huskins, Stacy ..... 94  
 Hustad, Vincent ..... 86, 145  
 Hutchens, John J. Jr. .... 60, P123

**I**

Iglesia, Michael ..... 140  
 Iqbal, Muhammad Javed ..... P59  
 Isbell, Ashley D. .... P112  
 Isbell, Katie ..... P107  
 Iverson, John B. .... 208  
 Ivey, Sherrie ..... P68, P71

**J**

Jackson, Jeffery A. .... P3  
 Jackson, K.E. .... P45  
 Jackson, Paula ..... 132, P73, P79,  
 Jacob, Nitya P. .... P54  
 Jacobson, Josie ..... P69, P70  
 Jamerson, Melissa ..... 1  
 Janson, Eric M. .... 172  
 Jendrek, Amory L. .... P13  
 Jenkins, Michael ..... P89  
 Jensen, Douglas P. .... 165  
 Jernigan, Leon ..... 152  
 Jernigan, P.L. .... P45  
 Johansen, Kristen ..... P63  
 John, Archanaa ..... 32  
 Johnson, Elizabeth ..... P76, P77  
 Johnson, Emmy ..... 112  
 Johnson, George P. .... 22  
 Johnson, Kimberly ..... P38  
 Johnson, Mary ..... 139  
 Johnson, Robert J. .... 70  
 Jolls, C. L. .... 82  
 Jones, Rebecca ..... 47  
 Jones, Ronald L. ... 188, 205, 207  
 Jones-Held, Susan ..... P121  
 Jorgenson, Darwin ..... 134, P29  
 Junge, Randall ..... 120  
 Jutras, Brandon ..... P41

**K**

Kamoroff, Stephanie ..... P65  
 Kanes, Jessica ..... 60  
 Kania, Stephen A. .... 2  
 Karapatakis, Deno ..... 208  
 Kassem, Abdelmajid ... P68, P69,  
 ..... P70, P71, P72  
 Keel, M. Kevin ..... P39  
 Keen, Richard ..... 155  
 Keiffer, Carolyn H. .... P120  
 Keller, Harold W. .... 85, 96, P87  
 Kelly, Lisa ..... 152  
 Kennedy, Michael L. .... 180, 181  
 Kenyon, William J. .... 27  
 Khan, Rabia ..... P48  
 Khan, Sana ..... P50  
 Kilgore, Courtney M. .... 96, 97  
 Kinner, Dave ..... 6  
 Koigi, Rachael N. .... 66  
 Kokwaro, Alfred H. .... P16  
 Koontz, Joshua M. .... P83  
 Koontz, Stephanie, M. .... 89  
 Kosal, Erica ..... 187  
 Kovach, Kateherine, E. .... P59  
 Kovach, Margaret J. .... P64  
 Kovacic, David ..... 73  
 Krentz, Robert J. .... 63  
 Krentz, Tyler ..... 52  
 Kron, Kathleen ..... 166, 168  
 Krueger, Nicole ..... P68, P71  
 Krzysik, Anthony ..... 73  
 Kujala, Carolyn ..... P117  
 Kulya, Maria ..... P38  
 Kuppinger, Dane M. .... 190  
 Kyle, Dennis E. .... 121

**L**

Lamb, Trip ..... 111  
 Lamont, E. E. .... 95  
 Landers, Stephen C. .... 47, 124  
 Lane, Evan ..... P116  
 Langdon, Keith ..... 50  
 Larson, Brett ..... P91, P92



Latta, Erika ..... P114  
 Lattin, Christine ..... P84  
 Lau, On Lee ..... 91  
 Laursen, Jeff ..... 162  
 Lawrence, Addison L. .... 31  
 Lawrence, Kathy S. .... 78  
 Leet, Jessica ..... 32  
 Lett, Carly ..... 84  
 Lewis, Greg P. .... 131  
 Lewis, Shawn L. .... 2  
 Lightfoot, David A. .... P70  
 Lindsay, David S. .... 43, 46, 164  
 Lisk, Ryan ..... P79  
 Little, Susan E. .... 45  
 Lloyd, Dorothy H. .... P15  
 Lobato, D. N. .... P1  
 Long, Richard A. .... 28, 29, P55  
 Long, Russell ..... 73  
 Lottes, Angela ..... P117  
 Lowrance, Richard ..... 67  
 Luken, James O. .... 60, 89, P123  
 Luo, Haiwei ..... 28, 29  
 Lyle, Sonia ..... 66

# M

Mackechine, Robynn... P107, P108,  
 ..... P109  
 MacKellar, April ..... 140  
 Malloy, Nicole ..... P116, P117  
 Mangan, Karen ..... 99  
 Mann, Margaret ..... P117  
 Marchin, Reneé ..... 91  
 Marciano-Cabral, Francine ..... 1  
 Marik, J. E. .... 82  
 Marshall, Harold G. .... 70  
 Mathews, Kathy ..... 6, 8  
 Matson, Ronald ..... 127  
 Matthews, Tony ..... 100  
 Matthews, Elizabeth R. .... 146  
 McCarthy, Brian C. ... 87, 153, 193,  
 ..... 196, P113, P120  
 McCoard, Noah S. .... 106  
 McConnel, Michael ..... P33  
 McDonald, Ashley M. .... P110  
 McElroy, Thomas . 132, P73, P79,  
 ..... P94, P95  
 McInroy, John A. .... 78  
 McIntosh, Amy V. .... 205  
 McKinney, Landon ..... 199  
 McKinney, Lela ..... 199  
 McLetchie, D. Nicholas ..... 83, 90  
 McMahan, Caleb D. .... P20  
 McMillan, Katherine ..... P42  
 McMullen, Conley K. .... 206  
 McPherson, Douglas W. .... 206  
 McQuaide, Jonathan ..... 191  
 Meade, Mark, E. .... 31, 154, P17,  
 ..... P18, P21, P53  
 Meador, Jeffery, A. .... P24  
 Mecham, John A. .... 159, 187  
 Meiners, Scott ..... 86  
 Meksem, Kahlid ..... P70  
 Melillo, Jerry M. .... 217  
 Mercadante, Austin ..... 175  
 Merwad, Abdullah ..... 46  
 Methven, Andrew S. .... 86, 145  
 Meuleners, Candice ..... P44  
 Meyer, Shelli L. .... P55  
 Michot III, Allen ..... 148  
 Miller, Andrew N. .... 86  
 Mills, Edward D. .... P37  
 Milne, Mark A. .... 71

Minton, Russell L. .... 59  
 Mitchell, Chad H. .... P124  
 Mitchell, David ..... P93  
 Mitchell, Sheila ..... 46  
 Mitchum, Katherine ..... P67  
 Monello, Ryan ..... 38  
 Montgomery, Meredith ..... P75  
 Moore, James E. .... 147  
 Moore, Michael K. .... 113  
 Morgan, Courtney A. .... P15  
 Morris, Michael Wayne ..... P126  
 Murdock, Chris 31, 212, P52, P57  
 Murdock, Jessica H. .... 45, P34  
 Murrell, Zack E. .... 25, 92, P124,  
 ..... P125  
 Muscarella, Mario ..... 30  
 Musselman, Lytton J. .... 19, 201  
 Muthukrishnan, Suresh ..... 56

# N

Nagarkatti, Rana ..... 126  
 Nasir, Amjad, M. .... 180  
 Nayduch, Dana ..... 116, 125  
 Nelson, Diane R. .... 186  
 Nelson, John B. .... 202, 203  
 Nelson, Lawrence ..... 31, 101,  
 ..... 98, P76, P77, P85, P86  
 Neufeld, Howard S. 101, 198, P76,  
 ..... P77, P85, P86  
 New, John C., Jr. .... 2  
 Newton, Joseph, C. .... 43  
 Nichols, Al ..... P21  
 Nichols, Becky J. .... 50  
 Nikaido, Selene S. .... 171  
 Norton, Terry M. .... 107  
 Nutter, Jonathan ..... 73

# O

O'Brian, Jack ..... 48, P43  
 O'Connor, Tom ..... 45  
 Ogasawara, Masamichi ..... P23  
 Ogez, Brittany D. .... 165  
 O'Hara, Long ..... P61  
 O'Kelley, Jeffery J. .... 212  
 Okenkpu, Florence A. .... 180  
 Olander, Charles P. .... 154  
 Olbert, Jean ..... 175  
 Olivier, Hillary M. .... P54  
 Orebaugh, Clinton ..... 154  
 Osland, Michael ..... 11  
 Otieno, Michael ..... 159  
 Ouellette, John ..... 13

# P

Page, Caroline ..... P94  
 Page, Miranda ..... 116  
 Pahl, James W. .... 11  
 Pannkuk, Evan L. .... P35  
 Paradise, Christopher, J. .. 52, 53  
 Parihar, Manish ..... P47  
 Parker, Charles R. .... 50  
 Parks, Bonnie ..... 186  
 Parsons, J. .... 12  
 Parsons, Sarah ..... 179  
 Patton, James G. .... 141  
 Patton, Sharon ..... 41, 42  
 Pauley, Thomas K. 106, 110,  
 112, 114, 115, 210, 211, 213,  
 214, P97,  
 ..... P98, P104, P105  
 Pawlik, Kathryn R. .... 210  
 Paydar, Ima ..... 141  
 Pederson, Charles L. .... 63, 145

Pederson, Neil ..... P84, P88  
 Peet, Robert K. .... 146  
 Pengsuk, Jaraspun, ..... P95  
 Perkins, Fern S. .... P85, P86  
 Perlmutter, Gary B. .... 144  
 Perrino, Fred ..... 154  
 Perry, Travis ..... P5  
 Peters, Holly J. .... 41, 42  
 Peters, Jennifer, M. .... 121  
 Peterson, Kristen M. .... P54  
 Peterson, Raymond ..... 197  
 Piccininni, Frank ..... 115, 211  
 Pierce, Emily ..... 37, 39  
 Pigg, Kathleen ..... 100  
 Pilgrim, Melissa A. .... 128  
 Piller, Kyle R. .... P20  
 Pittman, Joseph ..... 27  
 Pittman, Shannon ..... 58, P12  
 Plagens, Rosemary ..... P66  
 Platt, Steven, G. .... 4, 5  
 Platt, Thomas R. .... 163  
 Poindexter, Derick ..... 25, P125  
 Ponder, David ..... P57  
 Posey, Sam ..... 37, 39  
 Postava-Davignon, Marielle .. 122  
 Potter, Daniel ..... 16  
 Pottorff, Charly ..... 97  
 Powell, Walda A. .... 159  
 Price, Steven J. 57, 130, P8, P13,  
 ..... P14  
 Prouty, Dalene ..... 155  
 Pschandi, Maggie ..... P126  
 Puckett, Libby G. .... P76, P77  
 Pung, Oscar J. .... 123

# R

Rae, John G. .... P6  
 Rainho, Jennifer ..... P69, P70  
 Rainwater, Thomas R. .... 4, 5  
 Ramaswamy, Chandrashekar 45  
 Ramprasad, Vijay ..... 153  
 Rasco, J.F. .... P45  
 Rashleigh, Brenda ..... 81  
 Rasuck, Carla ..... 66  
 Rathore, Dharmendar ..... 126  
 Raveill, Jay A. .... 171  
 Ray, Margaret, W. .... 74  
 Rayburn, James R. .... 182  
 Rayner, Douglas A. .... 98, 189  
 Ream, Joshua T. .... P10  
 Redoblado, Tracy ..... P73  
 Reese, Scoitt ..... 127  
 Reid, Will W. .... 215  
 Reighard, Gregory L. .... 135  
 Reinhardt, Keith ..... P81  
 Renigar, Kelly ..... 83  
 Reyes-Garcia, Casandra P73, P79  
 Rheubert, Justin ..... P102  
 Rice, Chris L. .... 61, P4  
 Richardson, Channing ..... 23  
 Richardson, Curtis ..... 11  
 Richardson, Terry ..... P33, P110,  
 ..... P111, P112  
 Richter, Stephen C ..... P3, P16  
 Rick, Allen C. .... 23, 169  
 Ritland, David B. .... 173  
 Roberts, Janet E. .... 103  
 Roberts, Jonathan ..... P61  
 Robertson, Lacey D. .... P103  
 Robison, Henry W. .... 79  
 Rodning, Soren P. .... 43  
 Roellig, Dawn M. .... 40, P42

- Rogers, R.D. .... P45  
 Rogers-Lowery, Constance L. .... 76  
 Rohrbaugh, Lindsay ..... P11  
 Romano III, Frank A. .... 75  
 Roquemore, Jacqueline D. .... 69,  
 ..... P22, P25  
 Rosengaus, Rebeca ..... 122  
 Ross, Carrie ..... 32, 33  
 Ross, Michael ..... P28  
 Rosypal, Alexa C. .... 164  
 Rothermel, Betsie B. .... P103  
 Roumillat, William A. .... 160  
 Ruckdeschel, Carol ..... 37  
 Rude, B. .... 12
- S**
- Saa, Humberto Jimenez . 188, 207  
 Safer, Adam B. .... 108  
 Saunders, K. .... P97  
 Sauterer, Roger ..... 184, P90  
 Scarborough, Angela R. .... 96, 97  
 Schmaltzer, Paul A. .... 93  
 Schneider, Amy ..... 214  
 Schober, Jessica ..... P43  
 Scholtens, Brian G. .... 50  
 Schoonover, Jon ..... 10  
 Schroeder, Rachael E. .... 192  
 Schwadron, Margo ..... P28  
 Scott, A. Floyd ..... P10  
 Scott, Gerald R. .... 196, P113  
 Scull, Gregory ..... P17, P18, P56  
 Sekora, Nicholas S. .... 78  
 Selby, Jeff ..... P33  
 Sesler, Cheryl L. .... P2  
 Shafer, Justin K. .... 150  
 Shalabi, Rula ..... P67  
 Sharitz, Rebecca R. .... 218  
 Shaw, Joey ..... 16, 17, 94, P75  
 Sheehan, Kate L. .... 48, P43  
 Shepard, Benjamin R. E. .... 59  
 Sherrill, Jonathan J. .... P45  
 Shew, H. Wayne ..... P60  
 Shine, Megan ..... P65  
 Shirazi, Katayun T. .... 158  
 Shorter, Kim ..... 157  
 Shulman, Marisa Etta ..... 41, 42  
 Siew-Wai, Chin ..... 16  
 Sims, Christopher, G. .... P36  
 Small, Randall ..... 20, 15  
 Smelser, Penelope ..... 71  
 Smith III, Julian P.S. .... 77, P30  
 Smith, Alan F. .... P38  
 Smith, Blake ..... P74  
 Smith, Francis ..... 71  
 Smith, Gerald L. .... 24  
 Smith, Kristen, M. .... 18  
 Smith, Leslie ..... 53  
 Smith, William, K. .... 88, 151, P81  
 Snell, Kenneth, L. .... 96  
 Soos, Robert ..... P27  
 Spector, Michael P. .... 27  
 Spencer, Jennifer A. .... 43  
 Spratt, Henry ..... 32, 33, 34, 35  
 Spriggs, A. .... P97  
 Stalter, Richard ..... 96, 97  
 Stanback, Mark T. .... 175  
 Stanton, Daniel ..... P30  
 Steelman, Charlotte K. .... 51  
 Stehn, Sarah ..... P89  
 Steinmetz, Jeffery ..... P27  
 Stewart, Sunni D. .... P123  
 Stieha, Christopher ..... 90
- Stina, Lindsay ..... P61  
 Stockdale, Heather D. .... 43  
 Stocks, Ian C. .... 72  
 Stone, Peter ..... P28  
 Stover, Daniel B. .... 192  
 Stowe, Kirk A. .... P80  
 Strobl, Jeannine ..... 126  
 Stucky, Jon ..... 152  
 Sturdivant, J.M. .... P45  
 Sugar, James ..... 152  
 Super, Paul E. .... 50  
 Swanson, Eric ..... P116, P117  
 Swatloski, R.P. .... P45  
 Sweda, Michael T. .... P111  
 Sweet, Krista, C. .... P26  
 Switter, Beverly ..... 32  
 Sykes, R. .... 12
- T**
- Tackett, Kacie ..... P84, P88  
 Tackett, Kristina ..... 44  
 Talley, Jennell ..... 137  
 Tank, Justin L. .... P32  
 Tanner, Ben ..... 6  
 Taylor, Carl ..... 19  
 Taylor, Stephen A. .... P61  
 Taylor, Steve ..... P91, P92  
 Tedeton, Jonathan S. .... 80  
 Tesmer, John J.G. .... P62  
 Thackston, Leigh ..... P115  
 Thaker, A. .... P54  
 Thatcher, Elizabeth J. .... 141  
 Thomas, Belda ..... 155  
 Thomas, Joseph ..... P40  
 Threadgill, Paul ..... 200  
 Tidwell, Richard R. .... 164  
 Tolhuysen, Liliana Ortiz 49, P106  
 Tolson, Kim Marie ..... 61, P4  
 Tolson, Kim Marie ..... P4  
 Tomkins, Jeffery ..... P58  
 Toraya, Jules M. .... 113  
 Touchstone, Jennifer ..... P36  
 Townsend, M.B. .... P45  
 Townsend, Victor R. .... 71, 113  
 Trent, John ..... 204  
 Trierweiler, Annette ..... P5  
 Triplett, Jimmy ..... 7  
 Tsoi, Lam ..... 160  
 Tuberville, Tracey, D. .... 107  
 Turgeon, Victoria ..... P44  
 Turner, Joshua ..... P18
- V**
- Valentine, John F. .... 48  
 Van Cleave, René ..... P126  
 Van Den Meiracker, Kristen G. 80  
 Van Devender, Amy S. .... P96  
 Van Devender, Robert Wayne P96  
 Van Santen, Edzard ..... 78  
 Van Steenkiste, Niels ..... 79  
 Vance-Chalcraft, H. .... 82  
 Vaughn, Benjamin A. . . P76, P77  
 Vernier, Kimberly ..... 86  
 Vision, Todd ..... P58  
 Vogeliën, Dale ..... P74  
 Vogelmann, Thomas C. .... 88
- W**
- Waffa, Bradley J. .... 107  
 Wagner, David ..... 179  
 Waldrop, Thomas ..... 178  
 Walker, James ..... P68, P71  
 Walker, Joan L. .... 136, P82
- Walker, Michael ..... 123  
 Wallace, Michael ..... 73  
 Wallach, Jennifer ..... P21  
 Walters, Keith ..... 60  
 Wang, G. Geoff ..... P82  
 Wang, Roy ..... P68, P71  
 Ward, Ashley ..... P53  
 Washington, Evandrew . P68, P71  
 Watkins, Richard M. .... 26  
 Watts, Stephen ..... 31  
 Weakley, Alan S. .... 146  
 Wear, David N. .... 220  
 Weaver, Amanda ..... 34  
 Webb, Jennifer ..... P61  
 Webster, Christopher ..... P89  
 Webster, H. Kyle ..... 121  
 Wechter, William P. .... 135  
 Weeks, Katherine F. .... 136  
 Weiss, Justin A. .... P98, P101  
 Welch, Charles ..... 120  
 Welch, Nicole Turrill ..... 183  
 Wen, Jun ..... 16  
 Wenk, Evelyn S. .... P82  
 Wenning, Krista, M. .... 38  
 Wentworth, Thomas R. ... 74, 146  
 West, Andrew ..... 122  
 Whetstone, David R. .... 103  
 Whiteman, Howard ..... 118  
 Wibbels, Thane ..... P57  
 Wichmann, Brenda ..... 98  
 Wiese, Carrie, B. .... P64  
 Wigington, Nathaniel ..... P117  
 Wiley, John S. .... 87  
 Wilkens, H. Dawn ..... P2  
 Williams, John ..... P126  
 Williams, Joshua S. .... P16  
 Williamson, Seth ..... P99  
 Williard, Karl W.J. .... 10  
 Willis, John ..... P58  
 Willson, John D. .... P9  
 Wilson, C. Morgan ..... P1, P46  
 Winne, Christopher T. .... P9  
 Winstead, Joe E. .... P121  
 Wise, Dwayne ..... 138, 139  
 Wise, Jonathan ..... P65  
 Woodert, Diondra ..... P68, P71  
 Woodruff, Laurence ..... P63, P68  
 Woods, Samantha ..... P68, P71  
 Worster, Miranda ..... 98  
 Wotawa, Amy C ..... 65, 66
- X**
- Xu, Bo ..... 143  
 Yabsley, Michael J. 3, 38, 40, 45,  
 ..... 119, P34, P42
- Y**
- Yocum, Chad ..... 10  
 Yoder, Jay A. .... P32  
 Yongvanitchit, Kosol ..... 121  
 Young, Rob ..... 6
- Z**
- Zaczek, J.J. .... 14, 99  
 Zajac, Anne ..... 46  
 Zak, John ..... 73  
 Zavada, Jeanne ..... 186  
 Zedaker, Shepard M. .... P59  
 Zelmer, Derek A. .... 163  
 Zettler, Jennifer ..... 30  
 Zomlefer, Wendy B. .... P127

### ***Education Committee Luncheon and Workshop***

The Education Committee will offer a workshop entitled, "**Now what do I do? Career options in Biology and how to attain them**" from 12:00-1:30 on Thursday afternoon. The workshop is available to all and includes lunch paid for by ASB (limit 30 participants – Register early!!) The purpose of the workshop is to help both undergraduate and graduate students to understand the career options available to them as they approach graduation. We plan to have a brief opening presentation outlining career opportunities for those receiving degrees in biology followed by a round table discussion of these options. We also plan to discuss strategies for pursuing these various career options.

### ***Special Session and Luncheon: Women in Science***

**Converse College** is sponsoring a luncheon talk and discussion on "**Women in Science**" from 12:15-1:30 on Friday afternoon. The luncheon is available to all and includes lunch at a discounted rate thanks to Converse College! Space is limited, so register early! The talk during lunch (followed by discussion) will be given by Melissa Walker, George Dean Johnson, Jr. Associate Professor of History, Converse College, and is entitled "**Research is a Passion With Me: Three Pioneer Women Scientists**". A synopsis is below. For further information see the following URL: <http://www.converse.edu/wis/>.

Late-nineteenth century women with scientific aspirations faced numerous obstacles. The ideology of the period held that motherhood was a woman's highest calling and that intense intellectual activity would damage a woman's reproductive capacity. Many experts believed that women were incapable of the systematic thought required for scientific inquiry. Graduate schools often refused to admit women, maintaining that female students would take the place of men who needed education in order to support families. Women's own families often opposed their ambitious personal goals.

In spite of the obstacles, many women stubbornly persevered and became scientists. These pioneering women displayed the characteristics typical in male scientists. They enjoyed an unusually precocious early intellectual life and a fascination with nature. They often described innovative and intense early schooling. Yet there were experiences unique to women scientists. They faced intense discrimination and often found themselves excluded from much hard scientific research, channeled into the fields thought to be more appropriate for women's interests, such as maternal and child health. Using the autobiographical accounts of Margaret Morse Nice, Dorothy Reed Mendenhall, and S. Josephine Baker, this talk will explore the lives of three pioneering women scientists.

### ***Saturday Herbarium Curators Workshop***

SERNEC (Southeast Regional Network of Expertise and Collections) is a five-year project funded by the National Science Foundation to develop a network of herbaria in the Southeast. This network is designed to encourage cooperation in databasing the region's collections by the year 2020, while at the same time

developing herbaria as community centers for learning about plants. To continue the work started at last year's ASB meeting in Columbia, South Carolina, the curators from the 150 herbaria in the Southeast will meet on Saturday after the ASB meeting for a workshop on "Research, Collaborations and Funding".

Our networking efforts in the Southeast put us at the forefront of a national effort to database biological collections. The Saturday Curator's Workshop will help us determine how we can interact in novel ways to provide a model for other regions as they develop their networks. These interactions will cut across taxonomic boundaries and across disciplines within biology, while developing new methods to get information to the diversity of users in the community.

SERNEC (see SERNEC.ORG) is funded by the National Science Foundation as a Research Coordination Network. Through this grant we have monies to offset the cost of travel to this meeting. If you need additional information about this Curator's Workshop please contact Zack Murrell at [murrellze@appstate.edu](mailto:murrellze@appstate.edu).

## Symposia

### Symposium I: Them's the Brakes: The Past and Future of North American Bamboo (Thursday morning session)

**Description:** Cane (*Arundinaria*), the only bamboo genus native to the U.S., presently exists in small, remnant stands throughout most of the southeast. Large stands, called canebrakes, initially covering millions of acres, were vital to wildlife and played a pivotal role in the hydrology and landscape ecology of the area, and the cultural history of several native American tribes (e.g., Cherokee and Choctaw). Today, canebrakes are regarded as one of the U.S.'s most critically endangered natural plant communities, covering <2% of their former extent, with expansive canebrakes non-existent. Listed as "Critically Rare" by USGS and as "Globally Rare" by TNC, the loss of canebrakes has directly impacted many riparian ecosystems resulting in the loss of wildlife habitat, soil erosion, poor water quality, and flood control. Historical accounts suggest the loss of these vulnerable habitats has resulted in the extirpation (and perhaps the extinction) of many species, including >3 species of birds and >20 species of lepidoptera. Unless the steps are made to conserve or restore large contiguous stands, this list of vulnerable species is expected to grow (e.g., Bachman's warbler, *Vermivora bachmanii*; swamp rabbit, *Sylvilagus aquaticus*).

Although interest in canebrake restoration and conservation for wildlife has been expressed by a number of conservation committees and authors, the amount of information about the biology and genetics of canebrakes and resources (e.g., plant materials) necessary to support large restoration activities is scant. This is a direct result of the unusual life cycle of bamboo. River cane is monocarpic, flowering once every 25-30 years (hence, a seed source is not available to generate propagules) and subsequently they die. While small restoration trials and propagation studies have provided a wealth of information, further studies are needed if large restoration activities are to be conducted. This symposium will: 1) bring together scientists studying everything from taxonomy to micropropagation, 2) give state-of-the-art knowledge on restoration and propagation techniques, and 3) develop future research needs for *Arundinaria* species.

For speakers and titles, see the program, papers #4-14.

### **Symposium II: Research at Undergraduate Institutions: Pitfalls and Possibilities (Thursday afternoon session)**

**Description:** The National Science Foundation recently published the findings of a multi-year study addressing the role of undergraduate research in STEM education. Not surprisingly, the results indicate that the undergraduate research experience has a positive effect on student pursuit of post-baccalaureate educational opportunities in the sciences. Although there were multiple factors influencing this result, one of the most important was the role of mentoring. When mentors were polled about their attitudes regarding the undergraduate research process, 7 in 10 said they receive "personal satisfaction" from their role as an undergraduate research mentor, while only 4 in 10 said undergraduate research was positively weighted in the promotion and tenure process at their institution. Given the importance of the undergraduate research experience in encouraging students to remain within the sciences, institutions whose mission focuses on undergraduate education are essential to maintaining our nation's role as a leader in science. Therefore, this symposium will focus on both institutional and pedagogical factors that further or impede success in research at undergraduate institutions. The target audience for the symposium is departmental administrators, incoming faculty and graduate students nearing the end of their graduate work and weighing the possibility of positions at undergraduate institutions.

For speakers and titles, see the program, papers #127-134.

### **Symposium III: The Southeast Regional Knowledge Partnership: From Regional Relevance to Global Significance (Friday afternoon session)**

**Description:** Ecological relationships are frequently ignored in project planning and implementation because planners and other stakeholders lack the time and resources to rapidly assimilate, interpret, and apply currently available ecological data and knowledge. One of the current challenges to the Ecological Society of America (ESA) is to develop effective "knowledge partnerships" with decision makers in government and business. Through these partnerships we can share the basic principles of ecology and clarify how they can help shape solutions to some of society's most vexing problems and promote sustainability. The vast majority of decisions that affect the environment are made in the private sector and on the local governmental level. Whether the decision maker is a factory supervisor or a county elected official, it is critical that they know how to seek, obtain, and use the best available ecological knowledge. Effectively addressing complex environmental problems requires access to accurate and up-to-date ecological information.

The ESA recognizes its Southeastern Chapter (SE-ESA) as the oldest regional chapter and the one with the largest membership. Accordingly, it has targeted SE-ESA, and its affiliation with the Association of Southeastern Biologists (ASB), as a logical, effective place to start in establishing dialogue toward implementing the Southeast Regional Knowledge Partnership, which will

seek to bring scientists, policy makers, and business and community leaders together to address the particular environmental issues confronting the states of Alabama, Louisiana, Mississippi, Florida, Georgia, North and South Carolina, Tennessee, Virginia, and West Virginia.

Ecologists who want to affect decision-making about the environment must understand the needs of decision makers and how to make ecological knowledge available in a form that is both accessible and useful. One way of accomplishing this is to enhance collaboration among community leaders, government officials, business leaders and environmental scientists. These four sectors are the target audience for the Southeast Regional Knowledge Partnership, the primary purpose of which is to create a series of forums and networks in which ecological information is made available and usable by individuals in local communities, government, business, and industry.

The purpose of this SE-ESA Chapter-sponsored symposium is to initiate dialogue among Chapter members and other interested attendees at the 2008 meeting of the ASB. This will be accomplished by first providing overviews of environmental issues of particular relevance to the southeast region and then following these presentations with an open dialogue between and among presenters and attendees.

For speakers and titles, see the program, papers #216-220.

### ***ASB 2008 Field Trips***

For its geographic area, South Carolina is rich in natural habitats and species diversity, and thus presents many excellent opportunities for biological research. The lower two-thirds of the state is dominated by coastal plain, and its related fall-line sandhills. The western third of the Palmetto State comprises Blue Ridge and Piedmont ecoregions. A series of field trips has been planned for the exploration of the Blue Ridge and Piedmont.

Trips are approximately a half-day in length and will involve caravans. Car-pooling, where possible, will be encouraged. All trips will begin from the check-in area at our convention center, the Spartanburg Marriott at Renaissance Park. "One way" participation, that is, without a return to Spartanburg, is OK. Trip end times are the times you could expect to be back in Spartanburg. Lunch will be on your own; bring whatever food and water you will need.

The middle of April in South Carolina is a beautiful time, as spring literally erupts across the state. Nevertheless, we often have cool snaps and sudden rainy weather in the spring, and storms are possible. Participants are requested to dress appropriately (including selecting proper footwear), and to be aware that ALL the field trips involve potential wet or muddy places. Spring is not particular bad in the mosquito and yellow-fly department (that's during the summer!), but insect repellent may be useful. The best philosophy, of course, is to be a good boy scout or girl scout, and to BE PREPARED. Consider also that we are home to several trillion fire ant nests, which can make a field trip very unpleasant. Departure and return times may be subject to minor changes that will be announced. For information, contact field trip coordinator Doug Rayner.

**ASB 2008 Field Trip Options**

1. **Botanical Diversity Field Trip**, Wadakoe Mountain, Pickens County SC. 8:00 am - 2:00 pm. Trip leader: Patrick McMillan, Clemson University, host of SCETV's "Expeditions." Spectacular plant diversity and many botanical rarities, because of unusual geology and soils. Maximum of 20 participants.
2. **Wildflowers Field Trip**, Bridal Veil Falls, Transylvania County, NC. 8:00 am - 2:00 pm. Trip leader: Doug Jensen, Converse College. An easy hike in an area with a great diversity of wildflowers and pteridophytes, finishing at the spectacular waterfall featured in the climactic scene of the *Last of the Mohicans*, which we will be able to walk behind. Hike includes fording an ankle- to shin-deep creek. Maximum of 20 participants
3. **Herpetological Field Trip**, Bat Cave and Hickory Nut Gorge, NC. Time 8:30 am – 2:30 pm. Trip leaders: Wayne Van Devender, Appalachian State University, Ab Abercrombie, Wofford College. Reptiles and amphibians of the piedmont and Blue Ridge, including green and crevice salamanders. Maximum of 15 participants.
4. **Birding Field Trip**, Cottonwood Trail, Spartanburg County, SC. 8:00 am – 12:00 pm. Trip leaders: Lyle and Sarah Campbell, USC Upstate. Avifauna of the South Carolina piedmont. Over 130 species have been reported from this oasis located just minutes from downtown Spartanburg. With uplands, hardwoods, pines, river edges, wetlands and meadows, you can expect a full suite of woodpeckers and other residents plus early warblers. Binoculars strongly recommended. Easy walking trail. Maximum of 20 participants.
5. **Aquatic Invertebrate Field Trip**, The Nature Conservancy's Blue Wall Preserve, Spartanburg County, SC. 9:00 am – 1:00 pm. This easternmost portion of the Blue Ridge Escarpment offers beautiful mountain views, old forests, and clear streams. Get your feet wet and discover the fascinating world of stream invertebrates from a fabulous upper piedmont stream. Learn about their role in the natural world, and how they can be used to assess water quality. Transportation provided for up to 14; maximum of 20 participants; waders provided for 10.
6. **Ichthyology Field Trip**, Middle Saluda River, Jones Gap State Park, Greenville County, SC. 8:45 am – 12:00 pm. Trip leader: Dan Rankin, SC Dept. of Natural Resources. Characteristic fish fauna of a pristine Blue Ridge mountain stream and a downstream piedmont segment of the same stream. Using several electrofisher units and nets, most (20+) of the 26+ species characteristic of these systems should be seen during this trip. Maximum of 15 participants; waders provided for 10.



## **Social Events**

**Wednesday night reception:** Immediately following the Plenary Session there will be a mixer with hors d'oeuvres and cash bar. Both the plenary address and the mixer will be held in the historic buildings of the Wofford College campus, just a short walk from the Marriott convention hotel. This mixer is the traditional place to catch up with old friends and make new ones.

**Thursday night social:** Let the Good Times Roll!

ASB has a reputation for hosting an exciting and fun-filled Thursday Night Social. This year's plans include all the excitement and fun, and a few new twists. A multimedia musical extravaganza will be provided by E&M Entertainment, giant screen music videos, dance lights, and a great sound system.

Don't miss the casino games! Yes, we'll have activities for those who want to sit back and enjoy the music from a gaming table. Weather permitting, outdoor activities and swimming will be available as well. There will also be quiet corners for those whose main priority is to hang out with old friends.

Your one-price ticket provides unlimited trips to a giant buffet of mouthwatering South Carolina favorites. Quench your thirst with featured beers and ales from RJ Rocker's, a great Spartanburg microbrewery. A selection of superb wines is also included, to ensure a most enjoyable and exciting evening.

Please note: ASB will provide transportation to/from hotels for this event only!

**Friday night Awards Banquet:** Cap off the meeting by dining with your friends and colleagues at the Awards Banquet, where we celebrate special scientific accomplishments. Students will enjoy a heavily subsidized price of \$15 per person (well below actual cost). Delicious beef, chicken, and vegetarian options are available. Following dinner, award presentations will be made. Long speeches are no longer a part of this banquet. (A reminder: those competing for ASB awards must register for and be present at the banquet in order to receive the award).

## **Activities for Guests**

Guests who are not participating in the conference will find many interesting places to visit in the Greenville-Spartanburg area. In Spartanburg, the brand-new Chapman Cultural Center, including the Spartanburg County Museum of Art, is immediately next door to the convention hotel. The Hatcher Garden and Woodland Preserve is a horticultural oasis near the center of the city. Historic homes include the Seay House and the Thomas Price House. Also close to Spartanburg you can relive a pivotal battle of the American Revolution at Cowpens National Battlefield, which can easily be combined with a trip to one of the state's largest outlet malls.

Greenville also has many attractions, including the spectacular Liberty Bridge over the Reedy River Falls, as well as the Greenville Zoo. Stroll through downtown Greenville, which recently won the American Main Street Award from the National Trust for Historic Preservation, and enjoy a wide range of shops and restaurants. Car enthusiasts love the exhibition and tour at the BMW Zentrum, BMW's first plant outside Germany, located between Greenville and Spartanburg



(near GSP airport). Golfers will find a huge range of public and semi-private courses throughout the upstate area.

### ***Travel to Spartanburg Marriott at Renaissance Park***

**For those wishing to use GPS or online maps, the address of the hotel is 299 North Church Street, Spartanburg, South Carolina 29306.**

**From Charlotte via I-85 South (71 miles, 1.3 hours).** Continue southbound on I-85 past a series of exits marked Spartanburg, including the Business I-85 spur. Exit #75 (SC-9) is marked "To Wofford College." Take that exit. At the top of the ramp, turn left. After the fourth traffic signal, SC-9 turns left down a ramp to join I-585. Do not turn there, but follow the sign straight ahead toward Wofford via North Church Street (US-221). After you pass the Spartanburg Regional Medical Center, be alert to the fact Church Street curves to the left at its intersection with the Asheville Highway. The front gate to the Wofford campus is on the left, 0.4 miles beyond that point. Continue southbound on North Church Street for three blocks to The Spartanburg Marriott, which is on the left.

**From Atlanta via I-85 North (170 miles, 3.3 hours).** These directions also apply to visitors coming from the **Greenville-Spartanburg International Airport (20 miles, 0.5 hours)**. Leave I-85 at Exit #69, the Spartanburg Business I-85 spur. Follow the freeway to Exit #4 (Asheville Highway / SC-56), marked "To Wofford College." At the bottom of the ramp, you are on Hearon Circle. The second exit off the circle is Asheville Highway and is marked with a Wofford sign. Continue straight ahead toward downtown Spartanburg for 2.7 miles. The front gate to the Wofford campus is on the left, 0.4 miles after the intersection with North Church Street (US-221). Continue southbound on North Church Street for three blocks to The Spartanburg Marriott, which is on the left.

**From Asheville and I-40 via I-26 East (65 miles, 1 hour).** Take Exit #15 (Spartanburg via US-176), marked "To Wofford College." At the top of the cloverleaf ramp, 8.2 miles from the college, turn right. After passing the First Baptist Church - North Spartanburg and a shopping center, the highway divides; be sure to bear left and stay on US-176 / I-585. Follow the freeway past the USC Upstate Campus and the Milliken Research Center and take Exit #25-B, North Church Street (US-221). After you pass the Spartanburg Regional Medical Center, be alert to the fact Church Street curves to the left at its intersection with the Asheville Highway. The front gate to the Wofford campus is on the left, 0.4 miles beyond that point. Continue southbound on North Church Street for three blocks to The Spartanburg Marriott, which is on the left.

**From Columbia and I-20 via I-26 West (90 miles, 1.3 hours).** Take Exit #28 (US-221), marked "To Wofford College." At the bottom of the ramp, 8.9 miles from the college, turn right. This dual-lane highway, which becomes South Church Street, takes you directly to the Spartanburg Marriott. After reaching the central business district, continue past the Spartanburg County Library and Morgan Square for about 0.4 miles to the entrance to the Marriott, which is on the right.

### ***2008 ASB Group Discount Hotels***

ASB has secured the following hotels at a discounted rate for exhibitors and attendees. Please use the following hotels when making reservations for the conference, as these hotels are providing additional services to accommodate ASB. Remember to ask for the special **ASB discounted rate when making reservations**, and **please make your reservations as soon as possible**. The Spartanburg Marriott at Renaissance Park is our Headquarters Hotel and has been secured for Exhibitors and Regular Members. Directions to each hotel can be found by visiting their websites (provided below). **THE LAST DAY TO RESERVE A ROOM AT THE DISCOUNTED RATE IS 3/14/08.**

<u>Hotel</u>	<u>Rates &amp; Rating</u>	<u>Notes of Interest</u>
<b><u>Headquarters Hotel</u></b>		
<b>Marriott @ Renaissance Park</b> 299 North Church St Spartanburg, SC 29306 <a href="http://www.marriott.com/spamc">http://www.marriott.com/spamc</a> 864/596-1211; 800/327-6465	S/D/T/Q*: \$95.00 3.5 Star	All functions/sessions (except Wednesday night Plenary talk & reception) will be held at this location. Full service, sports bar on premises, workout center, outdoor pool.
<b>The Courtyard</b> 110 Mobile Drive Spartanburg, SC 29303 <a href="http://www.marriott.com/spach">www.marriott.com/spach</a> 864/585-2400	S/D/T/Q*: \$90.00 3 Star	3 Miles to Spartanburg Marriott at Renaissance Park.
<b>Hampton Inn &amp; Suites            I-26 @ Westgate Mall</b> 801 Spartan Blvd Spartanburg, SC 29301 <a href="http://hamptoninnspartanburg.com">http://hamptoninnspartanburg.com</a> 864/699-2222	S/D/T/Q*: \$95.00 Suites: \$105.00	Daily Breakfast Included. 4 Miles to Spartanburg Marriott at Renaissance Park.
<b>Holiday Inn-Express            I-26 @ Westgate Mall</b> 895 Spartan Blvd Spartanburg, SC 29301 <a href="http://www.ichotelsgroup.com">http://www.ichotelsgroup.com</a> 864/699-7777; 888/400-9714	S/D/T/Q*: \$90.00	4 Miles to Spartanburg Marriott at Renaissance Park.

\* Single, Double, Triple, Quad.

**LOCAL COMMITTEE ASSIGNMENTS  
FOR THE 69<sup>TH</sup> ANNUAL MEETING  
FURMAN UNIVERSITY, GREENVILLE, SC  
AND  
WOFFORD COLLEGE, SPARTANBURG, SC**

<i>Local Arrangements Co-Chairs:</i>	Joe Pollard joe.pollard@furman.edu Doug Rayner raynerda@wofford.edu	(864) 294-3244 (864) 597-4624
<i>Program Committee:</i>	Dennis Haney dennis.haney@furman.edu G.R. Davis davisgr@wofford.edu	(864) 294-2050 (864) 597-4621
<i>Field Trips:</i>	Greg Lewis greg.lewis@furman.edu Doug Rayner raynerda@wofford.edu	(864) 294-3249 (864) 597-4624
<i>Social Events:</i>	Victoria Turgeon victoria.turgeon@furman.edu	(864) 294-3791
<i>Volunteer Coordinators:</i>	Min-Ken Liao min-ken.liao@furman.edu Lisa Thomas thomaslp@wofford.edu	(864) 294-3246 (864) 597-4620
<i>Tri-Beta Coordinators:</i>	Eli Hestermann eli.hestermann@furman.edu Stacey Hettes hettessr@wofford.edu	(864) 294-3527 (864) 597-4659
<i>Audiovisual Coordinator:</i>	Nicholas Schisler nicholas.schisler@furman.edu	(864) 294-3243
<i>Silent Auction:</i>	Edna Steele edna.steele@converse.edu	(864) 596-9120
<i>Meeting Coordinator:</i>	Scott Jewell a2zconvention@yahoo.com	(336) 421-0034

*The Meeting Coordinator handles Commercial Exhibits & Workshops,  
Registration, Hotel Accommodations, and Transportation.*

**AFFILIATE SOCIETIES MEETING WITH ASB  
APRIL 16-19, 2008**

The following affiliate societies will be in attendance at the 2008 Annual Meeting. We anticipate an excellent diversity of paper and poster presentations. The societies and their contacts are listed below.

**American Society of Ichthyologists  
and Herpetologists  
Southeastern Division**

Dr. Fred Zaidan  
Department of Biology  
SCNE 2312  
1201 W. University Drive  
University of Texas Pan American  
Edinburg, TX 78539-2999  
Office: (956) 292-7481  
e-mail: fzaidan@utpa.edu

**Beta Beta Beta  
Southeastern District I**

Dr. Virginia Martin  
Queens College of Charlotte  
1900 Selwyn Avenue  
Charlotte, NC 28274  
(704) 337-2261  
e-mail: martin@rex.queens.edu

**Beta Beta Beta  
Southeastern District II**

Dr. Donald H. Roush  
Dept. of Biology, Box 5181  
University of North Alabama  
Florence, AL 35632-0001  
(256) 765-4435  
e-mail: droush@unanova.una.edu

**Botanical Society of America  
Southeastern Section**

Dr. Lytton John Musselman  
Mary Payne Hogan Professor of  
Botany and Chair  
Department of Biological Sciences  
110 Mills Godwin Building/45th St  
Old Dominion University  
Norfolk, VA 23529-0266  
(757) 683 3595; Fax: (757) 683 5283  
e-mail: lmusselm@odu.edu  
<http://web.odu.edu/lmusselman>

**Ecological Society of America  
Southeastern Chapter**

Dr. Frank S. Gilliam  
Department of Biological Sciences  
Marshall University  
Huntington, WV 25755-2510  
(304) 696-3636; FAX: (304) 696-3243  
E-mail: gilliam@marshall.edu

**Society of Herbarium Curators**

Dr. Zack Murrell  
Department of Biology  
Appalachian State University  
Boone, NC 28608  
(828) 262-2674  
e-mail: murrellze@appstate.edu

**Society of Wetland Scientists  
South Atlantic Chapter**

Dr. Kimberli J. Ponzio  
St. Johns River Water Mgt. District  
P.O. Box 1429, Palatka, FL 32178  
(386) 329-4331  
e-mail: kponzio@sjrwmd.com

**Southeastern Society of  
Parasitologists**

Dr. Charles Faulkner  
Dept. of Comparative Medicine  
College of Veterinary Medicine  
University of Tennessee  
2407 River Dr, Knoxville, TN 37996  
(865) 974-5718; Fax: (865) 974-6232  
e-mail: ctfaulkner@utk.edu

**Southern Appalachian Botanical  
Society**

Dr. Howard Neufeld  
Department of Biology  
Appalachian State University  
Boone, NC 28608  
(828) 262-2683; Fax: 828-262-2127  
e-mail: neufeld@appstate.edu

## ***SPECIAL REMINDERS FROM THE PRINT EDITOR***

### **ASB BANQUET ATTENDANCE**

Please keep in mind that recipients of ASB awards must be present at the annual ASB banquet to receive the award. Therefore, all applicants for ASB awards must attend the banquet to insure the presence of the winners.

#### **PLEASE NOTE Publication of Abstracts**

As reported in the JOURNAL CHANGES announcement on page 45 of the January, 2007, issue of *Southeastern Biology*, the ASB and BBB abstracts of papers and posters presented at the annual meeting will be published in the July, 2008, issue of *Southeastern Biology*.

Please be aware that only the abstracts of papers and posters presented at the annual meeting will be published in the July issue. If a problem arises with the presentation of your paper and/or poster in person at the annual meeting, please notify the Local Arrangements Chair, Joseph Pollard, as soon as possible to work out a resolution of your situation. His e-mail address is Joe.Pollard@furman.edu, and his telephone number is (864) 294-3244.

### **INSTRUCTIONS FOR SUBMITTING ORAL PRESENTATIONS**

All oral presentations will be done using Microsoft PowerPoint only. Presenters should bring a backup copy on a CD or USB memory drive. **Complete and final presentations must be submitted on CD to the audiovisual coordinator to be received by April 4.** The first author's name and truncated title should be written on the upper surface of the CD using an indelible marker.

Submit the CD to be received by the April 4, 2008 to: **Dr. Nicholas Schisler, Department of Biology, Furman University, 3300 Poinsett Hwy., Greenville, SC 39613.**

### **VIEWING OF ABSTRACTS**

Abstracts of papers and posters will be available on the ASB website shortly before the annual meeting.

### ***Silent Auction***

Once again, ASB will have a Silent Auction in the Exhibit Hall. 100% of all proceeds will benefit student travel to the Annual Meeting. Last year's Silent Auction was a big success. Let's plan on another successful event to assist students with their travel expenses to the meeting in Spartanburg.

### ***Sponsorships/Industry Partners***

A wide selection of special sponsorships will be available to our Industry Partners. Please view the sponsorships on our web site: [www.asb.appstate.edu](http://www.asb.appstate.edu). For additional information you may call or e-mail our Meeting Coordinator, Scott Jewell, office: 336/421-0034, cell 336/213-7373, [A2ZConvention@yahoo.com](mailto:A2ZConvention@yahoo.com).

### ***Advertising***

The ASB is now offering advertising space in one or more of our quarterly publications, Southeastern Biology. Advertisers may also purchase space in our final on-site program, The ASB Schedule-At-A-Glance. Please view pricing structure, specifications and deadline scheduling on our web site: [www.asb.appstate.edu](http://www.asb.appstate.edu). For additional information you may call or e-mail our Meeting Coordinator, Scott Jewell, office: 336/421-0034, cell 336/213-7373, [A2ZConvention@yahoo.com](mailto:A2ZConvention@yahoo.com).



The Daniel Building on the campus of Wofford College, Spartanburg, South Carolina.

**AVAILABLE POSITIONS IN THE SOUTHEAST****Position:** Ecology**Institution:** Kennesaw State University**Location:** Georgia**Description:** Assistant Professor of Biology, Restoration Ecology.

A growing and progressive university in Georgia's public system of higher education invites applications for a nine-month, tenure-track positions of Assistant Professor of Biology in the Department of Biology & Physics beginning August 2008. Located on an attractive campus in suburban NW metropolitan Atlanta, Kennesaw State University enrolls approximately 20,000 baccalaureate, master's and doctoral students and is engaged in an impressive array of research and professional service initiatives.

The successful candidate will have an earned doctorate in Biology or a related area with interest and expertise in the area of Restoration Ecology, especially dealing with the interface between urban and suburban/rural environments.

Applications and nominations will be accepted until the position is filled. To guarantee consideration, application materials must be postmarked by 12 October 2007. Review of applications will commence on 12 October 2007 and will continue until the position is filled.

For a full description of this position and application procedures go to: [www.kennesaw.edu/facultypositions](http://www.kennesaw.edu/facultypositions).

Kennesaw State University, a member of the University System of Georgia, does not discriminate on the basis of race, religion, color, sex, age, handicap, national origin, or sexual orientation, as authorized by law. Georgia is an Open Records State. AA/EOE.

**Position:** Biologist**Institution:** Clayton State Univ.**Location:** Georgia**Description:**

THE DEPARTMENT OF NATURAL SCIENCES IN THE COLLEGE OF ARTS AND SCIENCES at Clayton State University is seeking applicants for Assistant Professor of Biology. The successful candidate will meet the following:

**REQUIRED QUALIFICATIONS FOR THE POSITION:**

- Earned a Ph.D. in biology or a closely related field (ABD candidates near to completion will be considered).
- Ability to teach a wide range of biology courses and laboratories.

**DESIRABLE QUALIFICATIONS FOR THE POSITION:**

- A strong background in organismal biology
- The ability and desire to teach introductory biology courses, comparative vertebrate anatomy, and human anatomy and physiology.
- The ability to teach upper level biology courses in area of expertise.
- Successful college teaching experience.
- Ability and desire to perform research with undergraduate students in area of expertise.

- Experience in and ability to provide leadership in using technology in teaching, including supporting and/or implementing courses using the Internet.

#### RESPONSIBILITIES:

- Teach the introductory biology sequences (biology majors and non-majors), comparative vertebrate anatomy, human anatomy and physiology, and upper-level biology courses in area of expertise.
- Engage in scholarly activity leading to presentation and publication.
- Develop proposals to support projects in undergraduate research and/or science education or have the ability to perform collaborative research at other institutions.
- Develop courses in your area of expertise.
- Participate in service to Department, College, University and community.
- Serve as an advisor for biology students.

THE POSITION is an academic year, tenure-track appointment that reports to the Head of the Department of Natural Sciences. The position will be available August 11, 2008. Salary will be commensurate with experience and competitive with comparable programs. In compliance with the Immigration Reform and Control Act of 1986, proof of authorization to work in the U.S. will be required at the time of hire.

Clayton State University is nationally recognized as a leader in the use of information technology to transform teaching, learning, and other aspects of the collegiate experience. For additional information about the Department of Natural Sciences, visit <http://a-s.clayton.edu/science/>.

#### APPLICATION PROCEDURES:

Applications received by November 15, 2007, are assured full consideration. Applications will be accepted until the position is filled. Qualified applicants should submit a letter of application, curriculum vitae, a statement of teaching philosophy, a brief description of research interests, unofficial transcripts of grades, and the contact information for three current references. Apply by mail or email ([JillSears@clayton.edu](mailto:JillSears@clayton.edu)) to: Ms. Jill Sears, Administrative Assistant to the Dean, College of Arts and Sciences, Clayton State University, 2000 Clayton State Blvd., Morrow, Georgia 30260

Clayton State University is committed to providing equal educational opportunity to all qualified applicants, without discrimination on the basis of race, color, national or ethnic origin, sex, sexual orientation, age, disability, or handicap, as a matter of University policy and as required by applicable State and Federal laws (including Title VI, Title VII, Title IX, Sections 503, and 504, AREA, ADA, E.O. 11246, and Rev. Proc. 75-50). Title IX Coordinator, Director of Human Resources (678) 466-4230. Individuals with disabilities, who need to request accommodations or obtain this document in an alternative format, contact the Disability Resource Center, Student Center Building, Room 255, (678) 466-5445.

**Contact Information:** E-mail: [JillSears@Clayton.edu](mailto:JillSears@Clayton.edu); Phone: 678-466-4705; Fax: 678-466-4899; Ms. Jill Sears, Administrative Assistant, College of Arts and Sciences, Clayton State Univ., 2000 Clayton State Blvd., Morrow, GA 30260.



**Position:** Microbiology

**Institution:** Hodges University

**Location:** Florida

**Description:**

Hodges University is private non-profit university located in southwest Florida. The University is a SACS accredited institution offering a variety of degrees at the associate, bachelor and master's level with a focus on the adult learner.

Hodges University is currently seeking qualified candidates for an Assistant Professor of Biology. Teaching responsibilities include lower division Biology courses as well as an upper division Microbiology course. All full time appointments are twelve month appointments and there is no tenure track at Hodges University. The anticipated start date is January 2008. Course load each trimester is three courses plus integrated lab. Most courses are offered in the evening.

Minimum qualifications:

- Doctorate degree in biology from a regionally accredited institution required
- Demonstrated ability of successful college level teaching in an adult centered institution
- Interest and expertise must be in teaching science courses, not research
- Demonstrated experience and willingness to engage with the University community to improve the educational experience of its students.

To apply please submit a cover letter, C.V., a statement of teaching philosophy and the names of three professional references to Dr. Carlene Harrison, Dean, School of Allied Health 2655 Northbrooke Drive, Naples Florida 34119.

**Contact Information:** E-mail: [charrison@internationalcollege.edu](mailto:charrison@internationalcollege.edu), Dr. Carlene Harrison, Dean, School of Allied Health, Hodges University, 2655 Northbrooke Drive, Naples, FL 34119.

**Position:** Assistant Professor

**Institution:** Armstrong Atlantic State Univ.

**Location:** Georgia

**Description:**

Armstrong Atlantic State University invites applications for the following faculty positions:

Assistant Professor, Biology (Plant Biology)

Assistant Professor, Biology (Vertebrate Biology)

Please visit the AASU employment website, [www.hr.armstrong.edu/jobs.htm](http://www.hr.armstrong.edu/jobs.htm) for details about these positions, including application procedures, deadlines, and contact information.

Georgia is an Open Records Law State \* AA/EOE

**Contact Information:** College of Arts and Sciences, Armstrong Atlantic State University, 11935 Abercorn Street, Savannah, GA 31419 USA.

**Position:** Aquatic Botanist

**Institution:** U. of West Florida

**Location:** Florida

**Description:** Aquatic Botanist Position

The Department of Biology at the University of West Florida, a comprehensive regional institution, invites applications for a 9-month, tenure-track position at the Assistant Professor level starting August 2008. Applicants must have a Ph.D. in plant biology or related field with a preferred specialty in aquatic botany or marine phycology and postdoctoral experience.

Responsibilities include the standard teaching load at the undergraduate and graduate levels including general botany and related existing courses, serving on graduate committees, and directing theses. Applicants are expected to establish an active research program that involves undergraduate and graduate students, and that is supported by external funding.

Salary commensurate with experience.

Applicants are to apply online at <https://jobs.uwf.edu>, the website of Human Resources at the University of West Florida. Be prepared to attach your curriculum vitae, letter of application/interest, statement of teaching philosophy, statement of research interests/plans, and a list of three professional references. The applicant should also arrange for three letters of professional reference to be sent to Aquatic Botanist Search Committee, Department of Biology, University of West Florida, 11000 University Parkway, Pensacola, FL 32514.

Full review of applications will begin January 15, 2008, but applications will be accepted until the position is filled.

**For more information**, please contact the Search Committee Chair Dr. Ted Fox ([tfox@uwf.edu](mailto:tfox@uwf.edu); 850.474.2754) or the Department Chair Dr. George Stewart ([gstewart@uwf.edu](mailto:gstewart@uwf.edu); 850.474.2748).

Apply online at <https://jobs.uwf.edu>

This position requires a criminal background screening. UWF is an Equal Opportunity/Access/Affirmative Action Employer.

**Position:** Anatomy and Physiology

**Institution:** Univ. of Arkansas Ft. Smith

**Location:** Arkansas

**Description:**

BIOLOGY FACULTY (08-10-0107)

EFFECTIVE DATE: August 2008

**JOB DUTIES:** Primary responsibilities include teaching introductory level laboratory courses in Biological Science. These courses will include Anatomy and Physiology labs, and may also include Microbiology and General Biology labs. Additional responsibilities may include web course development; recruitment and retention activities; curriculum planning, implementation, and evaluation; assessment/evaluation of instruction; and other duties as required and/or assigned.

**QUALIFICATIONS:** Minimum qualifications include a master's degree in Biology, and college-level teaching experience. Candidates with a master's degree in a related field with 18 graduate hours in biology may be considered. A doctorate is

preferred. Applicants with an educational emphasis in Anatomy and Physiology are preferred. Demands of the position require excellent oral and written communication skills; superior interpersonal skills; and the ability to utilize instructional technology in the classroom. Other job related education and/or experience may be substituted for part of these requirements.

**SALARY & BENEFITS:** Rank and salary will be commensurate with qualifications and experience. Competitive benefits package available including health, dental, life, and income protection plans; excellent retirement benefits; liberal leave plan; flex benefit plan; and tuition benefits for employee and family.

**DEADLINE:** Open until filled. For full consideration application materials should be submitted by January 11, 2008.

**APPLICATION PROCEDURE:** Submit letter of application, curriculum vitae, and unofficial college transcripts to: Search Committee, c/o Human Resources, UA Fort Smith, 5210 Grand Avenue, Fullerton Administration Building, Room 239 or P O Box 3649, Fort Smith, AR 72913-3649 or by e-mail to: [jobs@uafortsmith.edu](mailto:jobs@uafortsmith.edu). Electronic submission is encouraged. (Finalists will be required to submit an employment application.)

**Contact Information:** Job code: 08-10-0107; E-mail: [jobs@uafortsmith.edu](mailto:jobs@uafortsmith.edu); Web Site: [www.uafortsmith.edu](http://www.uafortsmith.edu); Phone: 479-788-7088, Fax: 479-788-7834, Search Committee, Human Resources, University of Arkansas-Fort Smith, 5210 Grand Avenue, P.O. Box 3649, Fort Smith, AR 72913 USA.

**Position:** Instructors

**Institution:** Mississippi State Univ.

**Location:** Mississippi

**Description:**

Two Instructor Positions, Department of Biological Sciences

<http://www.msstate.edu/dept/biosciences/bio.html>

#### POSITION FUNCTION

The Instructor is under the supervision of the Head of the Department of Biological Sciences. Each position is a full-time, non tenure-track, 9-month faculty position. The 9-month salary is \$34,000. Responsibilities include teaching introductory and advanced courses in Biological Sciences that may also include lab sections, perform preparatory functions for them, and coordinate and supervise teaching assistants associated with those courses. Teaching classes may be available for extra compensation during summer school.

#### ESSENTIAL DUTIES AND RESPONSIBILITIES

The following examples are intended as illustrations only of the various types of duties assigned to this position. The absence of specific statements of duties does not exclude those tasks from the position if the work is similar, related, or a logical assignment of the position.

1. Teach introductory and advanced courses in Biological Sciences.
2. Prepare materials for labs associated with assigned courses.
3. Supervise graduate teaching assistants assigned to those courses.

4. Work with the other departmental Instructors in a coordinated manner to accomplish the instructional goals of the department.

#### MINIMUM QUALIFICATIONS

1. Master's degree in a field of the biological sciences or a related field amenable to instruction of BIO courses.
2. Minimum of 1 year work-related instructional experience at the university or community college level.
3. Excellent interpersonal, oral and written communication skills.
4. Strong organizational skills.
5. Experience supervising others.

#### PREFERRED QUALIFICATIONS

Two or more years of work-related instructional experience in higher education.

#### KNOWLEDGE, SKILLS AND ABILITIES

1. Excellent interpersonal skills combined with strong oral and written communication skills.
2. Strong computer skills helpful.

#### INSTRUCTIONS FOR APPLYING

To apply, send curriculum vitae, and teaching statement, plus relevant areas of teaching competence. Applicants should also arrange for at least three letters of reference to be submitted on their behalf. Screening will begin December 14, 2007, and will continue until the position is filled. Send application packets to: Dr. Nancy Reichert, Head, Department of Biological Sciences, P. O. Box GY, Mississippi State University, Mississippi State, MS 39762 (e-mail: [facultysearch@biology.msstate.edu](mailto:facultysearch@biology.msstate.edu)).

**Position:** Biotechnology

**Institution:** Albany State University

**Location:** Georgia

**Description:**

**RANK AND POSITION:** Assistant Professor of Biology

**EFFECTIVE DATE:** August 1, 2008

**SALARY:** Commensurate with training and experience

**AREA(S) OF SPECIALIZATION:** Biology

**QUALIFICATIONS:** Applicants for the position should have a Doctorate degree in Biology. Evidence of scholarly, professional activities, i.e. grant writing and other external funding opportunity, publishing and research required. Post doctoral training in Biotechnology and Bioinformatics will be given preference.

**MAJOR RESPONSIBILITIES:** The individual filling the position will teach undergraduate and graduate courses in Biology with an average teaching load of twelve credit hours per semester, advise students, serve on departmental and university committees, participate in university functions and perform other duties as assigned. The individual will also be expected to engage in undergraduate research projects-preferably in biotechnology area.

**THE INSTITUTION:** Albany State University is a fully accredited unit of the University System of Georgia. The Department of Natural Sciences currently has twelve (12) faculty members. The Department of Natural Sciences offers degrees in Biology, Chemistry and Science Education.

Faculty members receive all benefits provided by the University System of Georgia, including hospital and major medical insurance, group life insurance and participation in the Georgia Teachers' Retirement System, Optional Retirement Plan and Social Security.

**APPLICATION FORMS:** Current federal law requires identification and eligibility verification prior to employment. Only U.S. citizens and aliens authorized to work in the United States may be employed. The application deadline for the position is January 30, 2008 or until the position is filled. Please send an application (available on our website, [www.asurams.edu](http://www.asurams.edu)), letter of application, official transcripts, vitae and three (3) letters of recommendation, less than one year old, with original signatures to: Albany State University, Office of Human Resources Management, 504 College Drive, Albany, Georgia 31705.

**Contact Information:** Phone: 229-430-4920, Fax: 229-430-2867, Mr. Steve Grant Wilson, Director, Human Resources Management, Albany State University, 504 College Drive, Albany, GA 31705.

**Position:** Genetics

**Institution:** Widener University

**Location:** Pennsylvania

**Description:** Assistant Professor of Biology

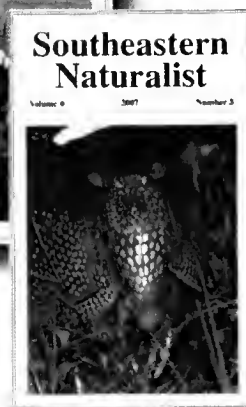
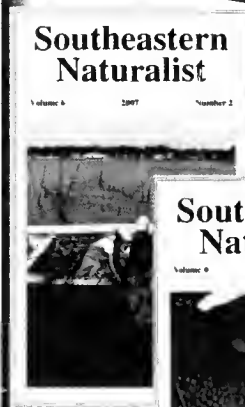
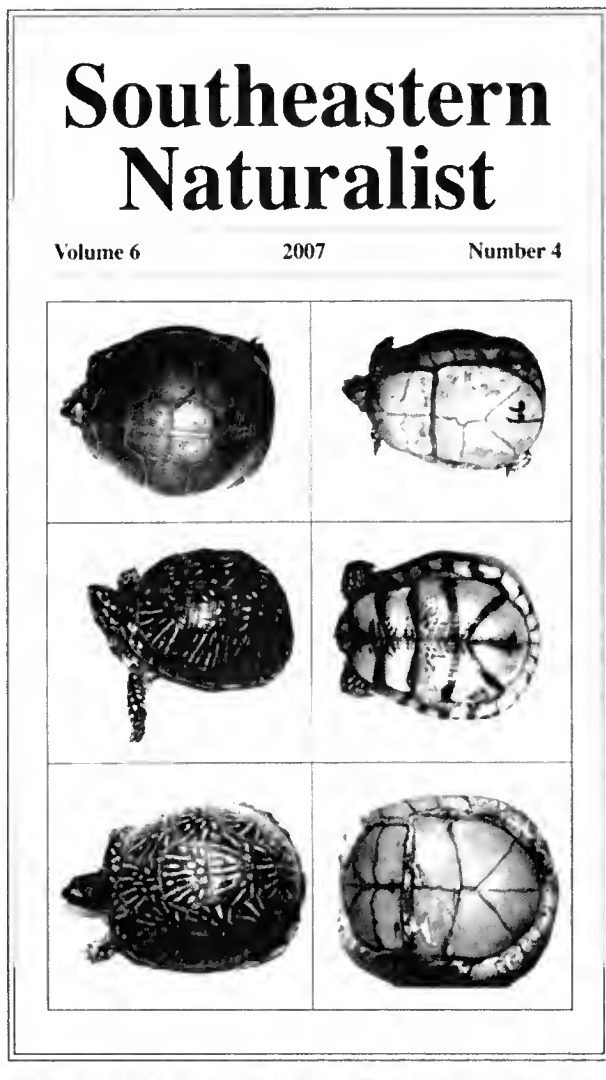
The Department of Biology at Widener University seeks applicants for a tenure-track assistant professor position in genetics to begin September 1, 2008. Candidates must have a high potential for undergraduate teaching and an interest in engaging undergraduates in research. Laboratory space is available in our modern biology facilities. The successful candidate must have completed the Ph.D. by the fall of 2008, although 1-2 years postdoctoral work is preferred. Teaching responsibilities will include a genetics course for biology majors and may include microbiology, introductory courses, and an upper-level course in the area of candidate's specialty.

Review of application materials will begin 1 Feb 08. To apply, send a letter of application, curriculum vitae, statements of teaching philosophy and research interests, and three letters of reference to Dr. Robert Morris, Dept. of Biology, Widener University, One University Place, Chester, PA, 19013. Electronic submissions are preferred. Questions should be directed to Dr. Robert Morris at 610-499-4030 or [rwmorris@widener.edu](mailto:rwmorris@widener.edu).

For more information about Widener University and the Department of Biology, see <http://www.widener.edu> and <http://www.widener.edu/cas/biology>. Widener University is an Affirmative Action, Equal Opportunity Employer and is committed to diversity in all areas of the campus community.

**Contact Information:** E-mail: [rwmorris@widener.edu](mailto:rwmorris@widener.edu); Phone: 610-499-4030, Dr. Robert Morris, Department of Biology, Widener University, One University Place Chester, PA 19013 USA.

ASB and the *Southeastern Naturalist* ...!  
A shared tradition of natural history scholarship.



- The latest regional natural history research.
  - **NEW!** Free online access for SENA subscribers to both the *Southeastern Naturalist* and its co-published journal *Northeastern Naturalist* at BioOne.org., starting in 2008.
  - **NEW!** Notes section presenting brief but interesting and significant field observations.
  - Concise reviews of new and notable books.
  - Approximately 800 pages per year. (4500 pages since 2002!)
- For more information about subscriptions or submissions, visit us at:  
[www.eaglehill.us/jseninf](http://www.eaglehill.us/jseninf).

---

# Southeastern Naturalist

---

Volume 6

2007

Number 4

---

**CONTENTS**

**RESEARCH ARTICLES**

<b>Multivariate Analyses of Shell Morphology of Putative Hybrid Box Turtles</b>	<b>571</b>
William I. Lutterschmidt, Sian A. Escobar, and Everett D. Wilson	
<b>Mammals of the North-central Piedmont of South Carolina</b>	<b>577</b>
Steven E. Fields	
<b>Scirtid Beetles (<i>Helodes pulchella</i>), Leaf Litter, and Treeholes: Is There Evidence of Facilitation in the Field?</b>	<b>597</b>
John Q. Burkhart, Leslie Smith, Shawn Villalpando, and Christopher J. Paradise	
<b>Survey of Bacterial and Fungal Associates of Black/Hybrid Imported Fire Ants from Mounds in Mississippi</b>	<b>615</b>
Richard Baird, Sandra Woolfolk, and C.E. Watson	
<b>Monitoring-based Assessment of Gap Analysis Models</b>	<b>633</b>
Jill A. LaBram, Amanda E. Peck, and Craig R. Allen	
<b>Accounting for Incomplete Detection when Estimating Site Occupancy of Bluenose Shiner (<i>Pteronotropis welaka</i>) in Southwest Georgia</b>	<b>657</b>
Brett Albanese, James T. Peterson, Byron J. Freeman, and Deborah A. Weiler	
<b>Potential Roles of Fish, Birds, and Water in Swamp Privet (<i>Forestiera acuminata</i>) Seed Dispersal</b>	<b>669</b>
Susan B. Adams, Paul B. Hamel, Kristina Connor, Bryce Burke, Emile S. Gardiner, and David Wise	
<b>The Vascular Flora of Mason Mountain Wildlife Management Area, Mason County, Texas</b>	<b>683</b>
Jason R. Singhurst, Laura L. Sanchez, Donnie Frels, Jr., T.Wayne Schwertner, Mark Mitchell, Sara Moren and Walter C. Holmes	
<b>Observations on the Reproductive Biology of Two <i>Notropis</i> Shiner Species</b>	<b>693</b>
Bruce Stallsmith, Kevin Butler, Amy Woodall, and Bob Muller	
<b>Marine Fish Diversity and Composition in the Mid-Atlantic and South Atlantic Bights</b>	<b>705</b>
Joseph W. Love and Peter D. Chase	
<b>Use of Altered Habitats by the Endemic Sand Skink (<i>Plestiodon reynoldsi</i> Stejneger)</b>	<b>715</b>
David A. Pike, Kelley S. Peterman, and Jay H. Exum	
<b>Life History and Color Variants in a Matriline of Oklahoma Salamander (<i>Eurycea tynnerensis</i>)</b>	<b>727</b>
Mark L. McKnight and Nathaniel A. Nelson	
<b>Survey for West Nile Virus Infection in Free-ranging American Alligators in Louisiana</b>	<b>737</b>
Rachel M. McNew, Ruth M. Elsey, Thomas R. Rainwater, Eric J. Marsland, and Steven M. Presley	
<b>Feeding Habits and Mouth Morphology of Young Silver Perch (<i>Bairdiella chrysoura</i>) from the North-Central Gulf of Mexico</b>	<b>743</b>
Gretchen L. Waggy, Mark S. Peterson, and Bruce H. Comyns	
<b>NOTES</b>	
<b>Texas Shrews (<i>Blarina hylophaga</i>) Lacking External Eye Openings</b>	<b>752</b>
Melissa C. Jones, Thomas R. Simpson, Richard Manning, and Michael R.J. Forstner	
<b>BOOK REVIEWS</b>	<b>755</b>

---

Publication Date: December 31, 2007

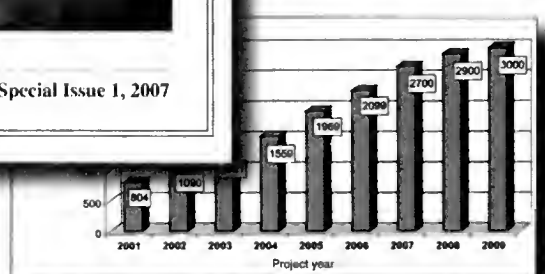

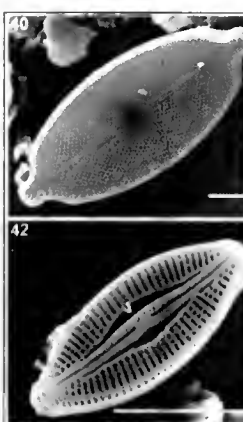


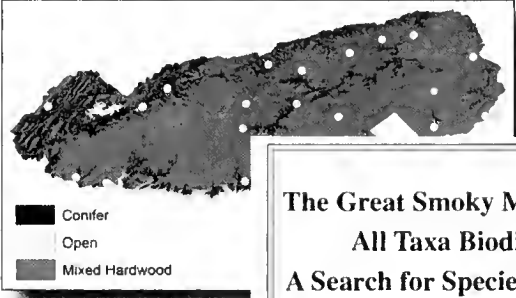


Printed on Recycled Paper


The Southeastern Naturalist is pleased to announce  
the publication of its first Special Issue:

**“The Great Smoky Mountains National Park All Taxa Biodiversity  
Inventory: A Search for Species in Our Own Backyard”**

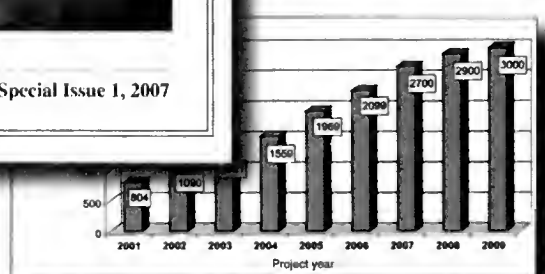
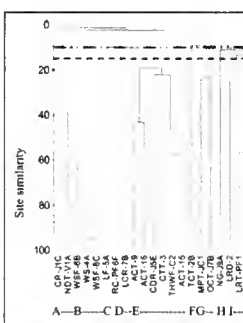
This Special Issue of Southeastern Naturalist, sponsored by the National Park Service and Discover Life in America, is based on the All Taxa Biodiversity Inventory Symposium presented in March 2006 at the 67th Annual Association of Southeastern Biologists Meeting held in Gatlinburg, TN. The content of the Special Issue includes an overview of the GSMNP ATBI, the history behind the development of the project, and a review of some of the key research being conducted as part of the project. This information will give the reader a sense of the current status of knowledge for the rich diversity of this important region as well as the progress this groundbreaking, interdisciplinary, cooperative effort has made. Copies are available at a cost of \$20 each. To order, contact Patricia Cox of the Tennessee Valley Authority Heritage Program at [pbcox@tva.gov](mailto:pbcox@tva.gov).



**The Great Smoky Mountains National Park  
All Taxa Biodiversity Inventory:  
A Search for Species in Our Own Backyard**



Southeastern Naturalist, Volume 6, Special Issue 1, 2007





---

# The Great Smoky Mountains National Park All Taxa Biodiversity Inventory: A Search for Species in Our Own Backyard

## CONTENTS

<b>Forward</b>	1
Peter White	
<b>The Smokies All Taxa Biodiversity Inventory: History and Progress</b>	27
Becky J. Nichols and Keith R. Langdon	
<b>Vegetation Communities of Great Smoky Mountains National Park</b>	35
Michael A. Jenkins	
<b>An Initial Inventory of Bacteria Found within the Soils and Waters of Great Smoky Mountains National Park</b>	57
Seán P. O'Connell, Emily A. York, Melissa B. Collins, Derren T. Rosbach, Kristina Reid Black, and Weaver B. Haney	
<b>The Mushroom TWIG: A Marvelous Mycological Menagerie in the Mountains</b>	73
Edgar B. Lickey, Shannon M. Tieken, Karen W. Hughes, and Ronald H. Petersen	
<b>Vertical Distribution of Lichen Growth Forms in Tree Canopies of Great Smoky Mountains National Park</b>	83
Erin Fanning, Joseph S. Ely, H. Thorsten Lumbsch, and Harold W. Keller	
<b>Great Smoky Mountains National Park's First Lichen Bio-Quest</b>	89
Harold W. Keller, Joseph S. Ely, H. Thorsten Lumbsch, and Steven B. Selva	
<b>New Algal Species Records for Great Smoky Mountains National Park, with an Annotated Checklist of all Reported Algal Taxa for The Park</b>	99
Jeffrey R. Johansen, Rex L. Lowe, Susan Carty, Karolina Fučíková, Catherine E. Olsen, Margaret H. Fitzpatrick, Jennifer A. Ress, and Paula C. Furey	
<b>Diatom Biodiversity and Distribution on Wetwalls in Great Smoky Mountains National Park</b>	135
Rex L. Lowe, Paula C. Furey, Jennifer A. Ress, and Jeffrey R. Johansen	
<b>Aquatic Microdrile Oligochaetes (Annelida, Clitellata) of Great Smoky Mountains National Park, North Carolina and Tennessee</b>	153
Mark J. Wetzel and M.A. Peggy Morgan	
<b>Ephemeroptera, Plecoptera, Megaloptera, and Trichoptera of Great Smoky Mountains National Park</b>	159
Charles R. Parker, Oliver S. Flint, Jr., Luke M. Jacobus, Boris C. Kondratieff, W. Patrick McCafferty, and John C. Morse	
<b>Biodiversity Explosion: Collembola (Springtails) of Great Smoky Mountains National Park</b>	175
Ernest C. Bernard and Kelly L. Felderhoff	
<b>Documenting Beetle (Arthropoda: Insecta: Coleoptera) Diversity in Great Smoky Mountains National Park: Beyond the Halfway Point</b>	183
Chris Carlton and Victoria Bayless	
<b>Lepidoptera of Great Smoky Mountains National Park: Methods and Results of the Inventory</b>	193
Brian G. Scholtens and David L. Wagner	
<b>Checklist of Odonata from Great Smoky Mountains National Park</b>	207
Charles Muise, Keith R. Langdon, Rebecca P. Shiflett, David Trently, Audrey Hoff, Paul Super, Adriean Mayor, and Becky J. Nichols	
<b>Rarity and Diversity in Forest Ant Assemblages of Great Smoky Mountains National Park</b>	215
Jean-Philippe Lessard, Robert R. Dunn, Charles R. Parker, and Nathan J. Sanders	
<b>"Smoky Bears"—Tardigrades of Great Smoky Mountains National Park</b>	229
Diane R. Nelson and Paul J. Bartels	

---

**Southeastern Naturalist, Volume 6, Special Issue 1, 2007**

---

Publication Date: December 1, 2007



Printed on Recycled Paper

## NEWS OF BIOLOGY IN THE SOUTHEAST

Ricky Fiorillo—News Editor\*  
Department of Biology  
University of Louisiana at Monroe  
Monroe, LA 71209

### ABOUT PEOPLE AND PLACES

#### TENNESSEE

Louis J. Gross, Professor of Ecology and Evolutionary Biology and Math at the University of Tennessee, Knoxville, has been elected to the Board of Directors of the American Institute of Biological Sciences by the membership-at-large. He is also the Program Chair for the Annual Meeting of the Ecological Society of America, to be held August 2008 in Milwaukee, Wisconsin.

\*Please email any news items to [fiorillo@ulm.edu](mailto:fiorillo@ulm.edu). ☞

---

### ALL TAXA BIODIVERSITY INVENTORY (ATBI)

#### GATLINBURG, TENNESSEE

ATBI is an organization devoted to surveying all life in the Great Smoky Mountains National Park.

More information about the ATBI and Discovery Life in America (DLIA) may be obtained from the Administrative Officer, Jeanie Hilten, by e-mail [jeanie@dlia.org](mailto:jeanie@dlia.org). The website is <http://www.discoverlifeinamerica.org> or at <http://www.dlia.org>. The mailing address is Discover Life in America, 1314 Cherokee Orchard Road, Gatlinburg, TN 37738. The telephone number is (865) 430-4752. ☞

### SOUTHERN APPALACHIAN FOREST COALITION (SAFC)

#### ASHEVILLE, NORTH CAROLINA

As stated in their newsletter *Across Our Mountains*, SAFC is an organization dedicated to “working together to protect and restore southern Appalachian forests.”

More information about SAFC may be obtained from their web site at <http://www.safc.org>, and by e-mail at [safc@safc.org](mailto:safc@safc.org). The mailing address is Southern Appalachian Forest Coalition, 46 Haywood Street, Suite 323, Asheville, North Carolina 28801-2838. The telephone number is (828) 252-9223. ☞

# OVER 1500 MUSEUM QUALITY OSTEOLOGICAL REPRODUCTIONS

Whether for teaching, research, or study, Bone Clones® offers the most accurate, affordable and detailed reproductions available today. For a complete listing of our over 1500 products, please visit our website.


[www.boneclones.com](http://www.boneclones.com)

1-800-914-0091

(toll free in the United States)

1-818-709-7991

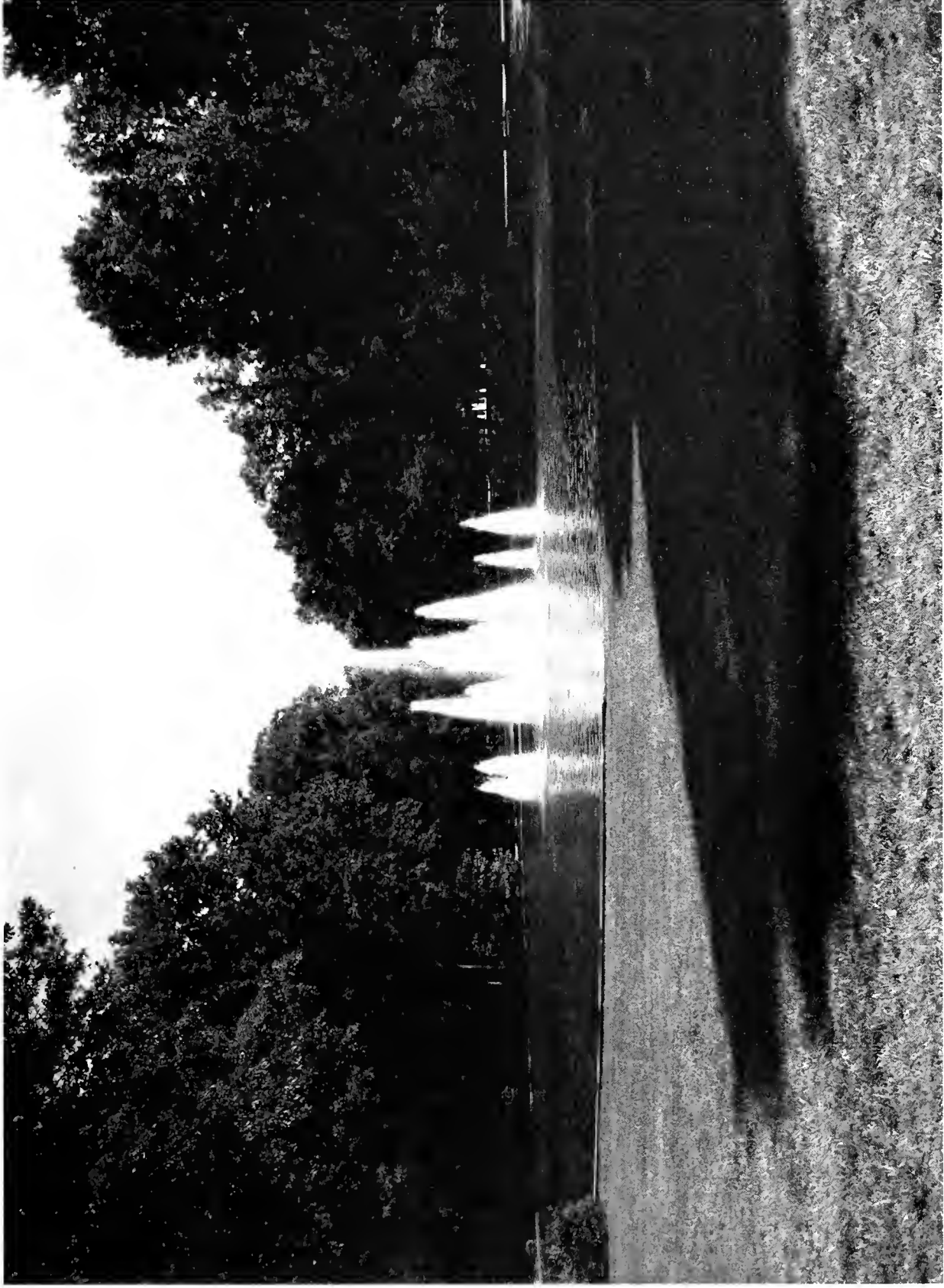


 **BONE CLONES®**  
INCORPORATED

©2007 Bone Clones, Inc.® All Rights Reserved.



Entrance to Historic Old Main Building on the campus of Wofford College, Spartanburg, South Carolina.



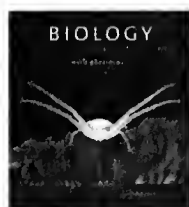
Fountain in a circular concrete pool on the campus of Furman University, Greenville, South Carolina.

**THOMSON**  
  
**BROOKS/COLE**

**Proud to be a patron  
 member of the ASB!**

**For more information, or to request review copies,  
 please visit us at [www.thomsonedu.com/biology](http://www.thomsonedu.com/biology).**

**Available Now from Thomson Brooks/Cole!**



Cecie Starr/Chris Evers/  
 Lisa Starr  
***Biology Today and  
 Tomorrow with  
 Physiology,***  
 Second Edition  
 Casebound: 0-495-10919-3.

Paperbound: 0-495-01654-3. ©2007.

With clear and engaging writing, trend-setting art, and unparalleled media, this concise text engages students, links concepts from chapter to chapter, helps you easily monitor students' progress, and simplifies lecture prep.



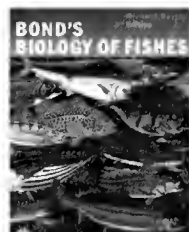
Cecie Starr/  
 Beverly McMillan  
***Human Biology,***  
 Seventh Edition  
 0-495-01596-2. ©2007.

Fine tuned for greater clarity and a more logical flow of ideas, this new edition presents core areas of human

biology with a focused presentation that is ideal for non-majors.



Cecie Starr/Ralph Taggart  
***Biology: The Unity  
 and Diversity  
 of Life,***  
 Eleventh Edition  
 0-495-01599-7. ©2006.



Michael Barton  
***Bond's Biology of  
 Fishes,***  
 Third Edition  
 0-12-079875-1. ©2007.  
 This revision of Bond's classic text features a new 4-color insert of over 150 photos.



Lauralee Sherwood  
***Human Physiology:  
 From Cells to Systems,***  
 Sixth Edition

0-495-01485-0. ©2007.  
 Overwhelmingly praised for its central theme of homeostasis, Sherwood's text helps students understand

how the body's systems work together.

G. Tyler Miller, Jr./Scott Spoolman  
***Living in the Environment:  
 Principles, Connections, and  
 Solutions,*** Fifteenth Edition

0-495-01598-9. ©2007.

***Essentials of Ecology,*** Fourth Edition  
 0-495-12544-X. ©2007.

***Sustaining the Earth: An Integrated  
 Approach,*** Eighth Edition

0-495-01597-0. ©2007. *A Thomson Advantage book.* Miller and new contributor Scott Spoolman have scrutinized every line of these new editions—enhancing, clarifying, and streamlining while also updating with the very latest environmental news and research.

**New updated editions available now!**

Susan R. Barnum  
***Biotechnology: An Introduction,***  
 Updated Second Edition  
 0-495-11205-4. ©2005.

Michael Cummings  
***Human Heredity:  
 Principles and Issues,***  
 Updated Seventh Edition  
 0-495-11308-5. ©2006.

OUTERNET  PUBLISHING

***Biology laboratory solutions from Thomson and Outernet Publishing***

Outernet offers ready-to-go, easily customized print and media solutions for introductory biology lab courses that combine robust content and interactive media assets. Visit [www.thomsoncustom.com/labs](http://www.thomsoncustom.com/labs).



# Point. Click. Discover!

## The NEW

# www.carolina.com

- Improved search**  
 Faster, more relevant results help you quickly find what you need and save time.
- Guided navigation**  
 Clean, precise navigation helps you efficiently shop online.
- Detailed product information**  
 Updated descriptions and photos help you make informed buying decisions.
- Simple checkout**  
 Fast, simple, secure checkout helps you buy with confidence and accepts purchase orders and tax exemptions.
- Teacher resources**  
 Free activities, lesson plans, and other resources help you keep your curriculum fresh.



**Order your  
copy online  
today.  
It's easy!**

### THE 2008 CAROLINA™ SCIENCE CATALOG IS TURNING HEADS!

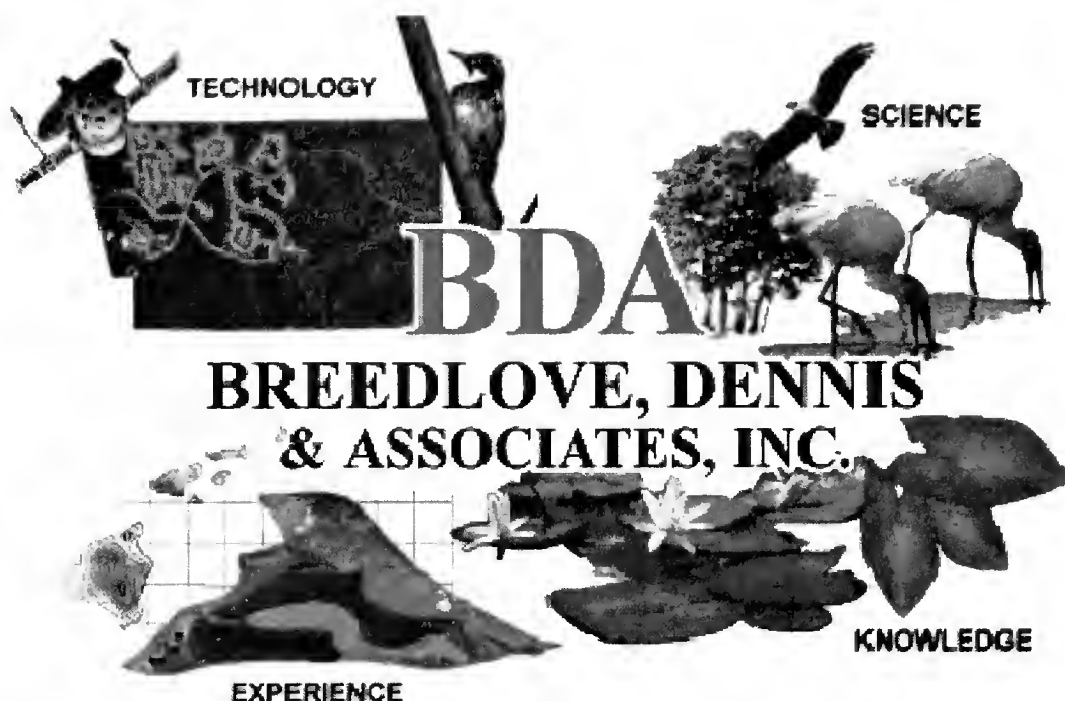
Carolina's Web site isn't the only fresh face getting attention. The 2008 Carolina™ Science catalog also has new features, with more choices and information to help you select exactly the right product for you and your students.

Visit us online at [www.carolina.com/catalog](http://www.carolina.com/catalog)  
or call 866.815.2450.

**Carolina Biological Supply Company**  
866.815.2450 • [www.carolina.com](http://www.carolina.com)

We listened. Advice from educators like you helped us create a completely new online shopping experience with improved focus on your unique needs. The NEW carolina.com now makes it easier than ever to find and purchase your science supplies. And its refreshed, updated teacher resources round out our commitment to world-class support. We can describe it, but you will have to experience it for yourself!

**CAROLINA**  
World-Class Support for Science & Math



**Dedicated to**  
**Problem Solving and Value-Added Solutions**

Web Site: <http://www.bda-inc.com/home.html>

Florida (USA) Office:  
**BREEDLOVE, DENNIS & ASSOCIATES, INC.**  
330 W. Canton Ave. Winter Park, Florida 32789  
Tel: 407 677-1882 Tel: 800 304-1882 Fax: 407 657-7008

Tennessee (USA) Office:  
**BREEDLOVE, DENNIS, YOUNG & ASSOCIATES, (TN) INC.**  
133 Holiday Court Suite 207, Franklin, Tennessee 37067  
Tel: 615 599-1996 Fax: 615 599-1998

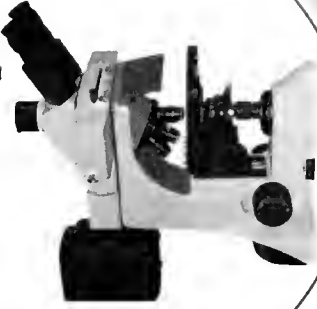
Copyright: Breedlove, Dennis & Associates, Inc. 2000.



# *Martin Microscope Company*

*Since 1946*

**Microscopes**



**Digital  
Imaging**



**MM Series  
Digital Camera  
Adapters**



**High Definition  
Video**



## **www.martinmicroscope.com**

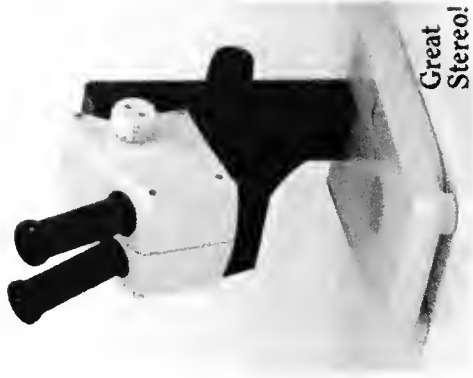
207 South Pendleton Street / Easley, SC 29640 / 864-242-3424 / Fax 864-859-3332 / [sales@martinmicroscope.com](mailto:sales@martinmicroscope.com)



Associated Microscope  
P.O. Box 1076  
Elon, NC 27244  
Tel: (800) 476-3893  
Fax: (336) 538-1847  
E-mail: [info@associatedmicroscope.com](mailto:info@associatedmicroscope.com)  
Web Site: [www.associatedmicroscope.com](http://www.associatedmicroscope.com)  
  
PATRON MEMBER OF ASB



Model # 13495211  
**LEICA Advanced  
Compound Microscope**  
*The Vision to Create a Unique Instrument!*



Model # 10447197  
**LEICA E SERIES**  
*The Advanced Stereo Zoom Microscope  
Of The Future... Today!*

## SALES AND SERVICE OF MICROSCOPES



**LEICA**

**SWIFT**

**MEIJI**

**DIGITAL CAMERAS**

**Quality Microscopes for Colleges and Universities**

**Call 1-800-476-3893 to Order!**

## ASB Membership Form

To join ASB or to renew your membership, please complete the information below and enclose check payable to Association of Southeastern Biologists. Mail to Tim Atkinson, Carolina Biological Supply Company, 2700 York Rd, Burlington NC 27215-3398. If you have any questions, please contact Tim Atkinson at 336 538 6224, FAX 336 538 6322, or e-mail [tim.atkinson@carolina.com](mailto:tim.atkinson@carolina.com). Thank you for your support.

We encourage all members to consider a higher level of membership support this year.

Name \_\_\_\_\_

Organization/Educational Institution \_\_\_\_\_

Address Line 1 \_\_\_\_\_

Address Line 2 \_\_\_\_\_

Address Line 3 \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Country \_\_\_\_\_

Zip Code \_\_\_\_\_ - \_\_\_\_\_ Telephone (\_\_\_\_\_) \_\_\_\_\_

Cell Phone (\_\_\_\_\_) \_\_\_\_\_ Fax (\_\_\_\_\_) \_\_\_\_\_

E-mail \_\_\_\_\_

Regular -- \$35 \_\_\_\_\_

Regular, 3 years -- \$95 \_\_\_\_\_

Family -- \$40 \_\_\_\_\_

Student -- \$15 \_\_\_\_\_

Emeritus -- \$15 \_\_\_\_\_

Contributing -- \$70 \_\_\_\_\_

Sustaining -- \$140 \_\_\_\_\_

Life -- \$350 \_\_\_\_\_


Patron -- \$750 \_\_\_\_\_

Library -- \$40 \_\_\_\_\_

Library, 3 years -- \$100 \_\_\_\_\_

**ASB ENRICHMENT FUND CONTRIBUTION** \_\_\_\_\_

Contributions to ASB, a not-for-profit organization exempt under Internal Revenue Code Section 501(c)(3), are tax deductible. We welcome any inquiries you may have.

If you wish to subscribe to *The Southeastern Naturalist*, please see page 180 for subscription information. 



**SOUTHEASTERN BIOLOGY**  
VOLUME 55, NUMBER 2, APRIL, 2008  
<http://www.asb.appstate.edu/>

***In This Issue***

A MESSAGE FROM THE PRESIDENT .....	97
ASB CANDIDATES FOR OFFICE--2008 .....	99
PROGRAM OF THE 69 <sup>TH</sup> ANNUAL MEETING.....	107
PORTRAYAL OF FURMAN UNIVERSITY .....	108
PORTRAYAL OF WOFFORD COLLEGE.....	108
DESCRIPTION OF SPARTANBURG CITY.....	109
DESCRIPTION OF THE SPARTANBURG MARRIOTT .....	109
ASB 2008 SCHEDULE .....	109
IMPORTANT INFORMATION FOR PRESENTERS .....	112
FLOOR PLAN OF MARRIOTT MEETING ROOMS .....	113
PLENARY SPEAKER .....	114
ASB WEDNESDAY PAPER SESSIONS .....	116
ASB THURSDAY PAPER SESSIONS .....	117
ASB FRIDAY PAPER SESSIONS .....	132
ASB THURSDAY AND FRIDAY POSTER SESSIONS .....	141
COMMERCIAL WORKSHOPS .....	154
AUTHOR INDEX .....	157
COMMITTEE WORKSHOPS .....	161
SYMPOSIA .....	162
ASB FIELD TRIPS.....	164
SOCIAL EVENTS AND GUEST ACTIVITIES .....	166
TRAVEL TO SPARTANBURG.....	167
HOTEL INFORMATION .....	168
LOCAL COMMITTEE ASSIGNMENTS .....	169
AFFILIATE SOCIETIES MEETING WITH ASB .....	170
SPECIAL REMINDERS FROM THE PRINT EDITOR .....	171
SILENT AUCTION, SPONSORSHIPS, AND ADVERTISING .....	172
AVAILABLE POSITIONS IN THE SOUTHEAST .....	173
THE SOUTHEASTERN NATURALIST JOURNAL INFORMATION .....	180
NEWS OF BIOLOGY IN THE SOUTHEAST .....	184
ATBI AND SAFC INFORMATION .....	184
ADVERTISEMENT FOR BONE CLONES, INC. ....	185
ASB PATRON MEMBERS.....	188

**PATRON MEMBERS**

Associated Microscope, Inc., Elon College and Haw River, NC • Tim Atkinson,  
Burlington, NC • Breedlove, Dennis and Associates, Inc., Orlando, FL • Carolina  
Biological Supply Company, Burlington, NC • Martin Microscope Company, Easley, SC  
• Thomson-Brooks/Cole, Belmont, CA • Marilyn Pendley, Maiden, NC.